THE UNIVERSITY OF MANITOBA

BUILDING HARDWARE FROM THE FORT AT COTEAU DU LAC, QUEBEC

by

PETER J. PRIESS

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE

OF MASTER OF ARTS

DEPARTMENT OF ANTHROPOLOGY

WINNIPEG, MANITOBA

October, 1972

THE UNIVERSITY OF MANITOBA ELIZABETH DAFOE LIBRARY

ABSTRACT

A collection of 32,457 individual items of probable building hardware from the Fort at Coteau du Lac, a fortified canal and transshipment point, constitute the subject of this study. These artifacts represent all archaeological excavations at the site and reflect construction from establishment of the site in 1779 until the erection of the last building in the 1860s. The artifacts have been grouped into types based on similarities of use and further subdivided into variations based on similarities of manufacture and form as a means of providing a record of their existence and a basis for identification and comparison in future study.

The history of the site spans the time period during which the manufacture of hardware was undergoing a transition from hand manufacture of the individual craftsman to mass production by machinery in factories, with greater sources of energy. This transition is reflected in some of the artifact types in the collection. It has become obvious that a time lag is involved in the diffusion and acceptance of new technologies or the products of new technologies and even developments within several hundred miles may take several decades to gain more than a token acceptance.

This provides an awareness of precautions to be considered in the interpretation of artifacts from other sites. An awareness of the transition has also made it possible to suggest dates of construction for some of the buildings for which such information is not available.

CONTENTS

PREFACE xxix

Chapter 1: INTRODUCTION 1

The Site 1

The Artifacts 3

The Study 4

Chapter 2: BUILDING HARDWARE RESEARCH: PROBLEM AND POTENTIAL 8

Chapter 3: THE ARTIFACTS 14

Introduction 14

Manufacture 16

Types and Variations 23

Closure Hardware 23

Eyes 23

Description 23

Variations 24

Distribution 28

Gate Hooks 32

Description 32

Variations 33

Distribution 35

Hasps 39

Description 39

Variations 40

Distribution 41

Hinges 43
Description 43
Variations 46
Distribution 50
Pintles 57
Description 57
Variations 57
Distribution 60
Locks 65
Description 65
Variations 70
Door Locks 70
Door-Lock Keepers 79
Door-Lock Lock Bolts 81
Door-Lock Tumblers 83
Keys 83
Door-Lock-Key Escutcheons 86
Padlocks 87
Distribution 89
Shutter Dogs 108
Description 108
Variations 109
Distribution 111
Sliding Bolts 117
Description 117
Variations 118
Distribution 123

Staples 129

Description 129

Variations 129

Distribution 133

Thumb Latches 137

Description 137

Variations 142

Thumb-Latch Handles 142

Thumb-Latch Lift Bars 144

Thumb-Latch Bars 145

Thumb-Latch-Bar Locks 146

Thumb-Latch-Bar Guides 147

Thumb-Latch Catches 148

Distribution 149

Fastenings 161

Bolts and Nuts 161

Description 161

Variations 164

Bolts 164

Nuts 171

Distribution 172

Washers 182

Description 182

Variations 182

Distribution 184

Brackets 186

Description 186

Variations 186

Distribution 187

Nails 191

Description 191

Variations 199

Distribution 210

Pins 267

Description 267

Variations 267

Pins 267

Clevis Pins 268

Lynch Pins 269

Distribution 269

Rivets 271

Description 271

Variations 271

Distribution 272

Screws 274

Description 274

Variations 277

Distribution 278

Screw Nails 280

Description 280

Variations 280

Distribution 281
Timber Anchors 283
Description 283
Variations 284
Distribution 286
Miscellaneous Hardware 291
Hooks 291
Description 291
Variations 291
Distribution 291
Sheeting 293
Description 293
Variations 293
Distribution 294
Chapter 4: THE EXCAVATIONS AND THEIR ARTIFACTS 296
Introduction 296
Tabulation of Artifact Descriptions 298
The Excavations 306
The Canal and Associated Features (9G1) 306
Scarp Wall (9G2) 308
Octagonal Blockhouse (9G3) 312
Commanding Officer's Quarters (9G4 and 9G32) 336
South Storehouse, Gunshed (9G5) 374
North Storehouse (9G6) 389
North Blockhouse (9G7) 410
South Blockhouse (9G8) 419

Hospital (9G9) 427

Cloverleaf Bastion (9G10, 9G44, 9G45, 9G47, 9G48, 9G57) 442

Hospital-Master Carpenter's Quarters (9G11) 456

Gun Platforms (9G12, 9G42, 9G54, 9G55, 9G56) 465

Barracks-Carpenter's Shop-Stables (9G13) 480

Powder Magazine (9G14) 487

Stone Barracks (9G15) 496

Commissariat Officer's Quarters-Church (9G17) 513

Temporary Bakehouse and Canteen (9G18 and 9G19) 518

Bridge Abutments (9G20) 525

Guard House (9G21) 527

Bakehouse (9G22) 535

Barracks Master's Quarters (9G23 and 9G40) 543

Cookhouse (9G24) 550

Barracks Store (9G25) 557

Retaining Wall near North Blockhouse (9G26) 567

Miscellaneous Test Areas (9G27, 9G29, 9G30, 9G33, 9G34, 9G37, 9G41, 9G52) 577

Maypole (9G28) 590

Palisade (9G31) 593

Road South of Ramp and in Vicinity of Stone Barracks (9G38) 597

Road East and West of Canal (9G39) 601

Embrasure (9G43) 610

General Provenience (9G51) 612

Chapter 5: GENERAL DISCUSSION AND CONCLUSIONS 622

REFERENCES CITED 626

Tables

Table		
1	Eye Distribution - 9G	31
2	Gate Hook Distribution - 9G	38
3	Hasp Distribution - 9G	42
4	Hinge Distribution - 9G	55
5	Pintle Distribution - 9G	64
6	Door Lock Distribution - 9G	105
7	Door-Lock Keeper Distribution - 9G	105
8	Door-Lock-Key Distribution - 9G	106
9	Door-Lock Lock Bolt Distribution - 9G	106
10	Door-Lock Tumbler Distribution - 9G	106
11	Key Distribution - 9G	107
12	Padlock Distribution - 9G	107
13	Shutter Dog Distribution - 9G	116
14	Sliding Bolt Distribution - 9G	128
15	Staple Distribution - 9G	136
16	Thumb-Latch Handle Distribution - 9G	159
17	Thumb-Latch Lift Bar Distribution - 9G	159
18	Thumb-Latch Bar Distribution - 9G	159
19	Thumb-Latch-Bar Lock Distribution - 9G	160
20	Thumb-Latch-Bar Guide Distribution - 9G	160
21	Thumb-Latch Catch Distribution - 9G	160
22	Bolt Distribution - 9G	178

23	Nut Distribution - 9G	181
24	Washer Distribution - 9G	185
25	Bracket Distribution - 9G	190
26	Nail Variations	232
27	Nail Distribution (Variation and Provenience) - 9G	238
28	Nail Distribution (Variation and Length) - 9G	250
29	Nail Distribution (Manufacture and Provenience) - 9G	259
30	Pin Distribution - 9G	270
31	Clevis Pin Distribution - 9G	270
32	Lynch Pin Distribution - 9G	270
33	Rivet Distribution - 9G	273
34	Screw Distribution - 9G	279
35	Screw Nail Distribution - 9G	282
36	Timber Anchor Distribution - 9G	290
37	Hook Distribution - 9G	292
38	Sheeting Distribution - 9G	295
39	Identification and Construction Period of Operations	303
40	Hinges - 9G2	309
41	Staples - 9G2	309
42	Nail Distribution (Variation and Length) - 9G2	310
43	Brackets - 9G3	319
44	Door Locks - 9G3	319
45	Door-Lock-Key Escutcheons - 9G3	319
46	Eyes - 9G3	320
47	Gate Hooks - 9G3	320
48	Hinges - 9G3	321

49	Pins - 9G3	322
50	Pintles - 9G3	323
51	Rivets - 9G3	324
52	Screws - 9G3	324
53	Sheeting - 9G3	325
54	Sliding Bolts - 9G3	326
55	Staples - 9G3	327
56	Thumb-Latch-Bar Guides - 9G3	328
57	Timber Anchors - 9G3	329
58	Washers - 9G3	331
59	Nail Distribution (Variation and Length) - 9G3	332
60	Bolts - 9G4	338
61	Nuts - 9G4	339
62	Brackets - 9G4	339
63	Door Locks - 9G4	340
64	Door-Lock Keepers - 9G4	341
65	Door-Lock-Key Escutcheons - 9G4	341
66	Door-Lock Lock Bolts - 9G4	342
67	Door-Lock Tumblers - 9G4	342
68	Eyes - 9G4	343
69	Gate Hooks - 9G4	344
70	Hasps - 9G4	344
71	Hinges - 9G4	345
72	Hooks - 9G4	349
73	Keys - 9G4	349
74	Padlocks - 9G4	350

75	Pintles - 9G4	351
76	Screws - 9G4	353
77	Sheeting - 9G4	355
78	Shutter Dogs - 9G4	356
79	Sliding Bolts - 9G4	357
80	Staples - 9G4	358
81	Thumb-Latch Bars - 9G4	360
82	Thumb-Latch-Bar Locks - 9G4	360
83	Thumb-Latch Catches - 9G4	361
84	Thumb-Latch-Bar Guides - 9G4	362
85	Thumb-Latch Handles - 9G4	362
86	Nail Distribution (Variation and Length) - 9G4	363
87	Bolts - 9G32	367
88	Hasps - 9G32	367
89	Hinges - 9G32	368
90	Hooks - 9G32	368
91	Keys - 9G32	369
92	Pintles - 9G32	369
93	Staples - 9G32	370
94	Thumb-Latch Bars - 9G32	370
95	Nail Distribution (Variation and Length) - 9G32	371
96	Bolts - 9G5	375
97	Nuts - 9G5	376
98	Door Locks - 9G5	377
99	Eyes - 9G5	378
100	Hasps - 9G5	378

101	Hinges - 9G5	379
102	Keys - 9G5	380
103	Padlocks - 9G5	381
104	Pintles - 9G5	381
105	Rivets - 9G5	382
106	Screws - 9G5	382
107	Shutter Dogs - 9G5	383
108	Staples - 9G5	383
109	Thumb-Latch Bars - 9G5	384
110	Thumb-Latch Catches - 9G5	384
111	Nail Distribution (Variation and Length) - 9G5	385
112	Bolts - 9G6	390
113	Nuts - 9G6	391
114	Brackets - 9G6	391
115	Clevis Pins - 9G6	392
116	Door Locks - 9G6	392
117	Door-Lock Keepers - 9G6	393
118	Eyes - 9G6	394
119	Hasps - 9G6	395
120	Hinges - 9G6	396
121	Keys - 9G6	397
122	Lynch Pins - 9G6	398
123	Padlocks - 9G6	398
124	Pintles - 9G6	399
125	Rivets - 9G6	400
126	Screws - 9G6	401

127	Sheeting - 9G6	402
128	Shutter Dogs - 9G6	402
129	Sliding Bolts - 9G6	403
130	Staples - 9G6	403
131	Thumb-Latch Catches - 9G6	404
132	Thumb-Latch-Bar Guides - 9G6	404
133	Thumb-Latch Lift Bars - 9G6	405
134	Washers - 9G6	405
135	Nail Distribution (Variation and Length) - 9G6	406
136	Bolts - 9G7	411
137	Nuts - 9G7	412
138	Door-Lock Lock Bolts - 9G7	412
139	Gate Hooks - 9G7	412
140	Hinges - 9G7	413
141	Keys - 9G7	414
142	Pintles - 9G7	414
143	Screws - 9G7	415
144	Staples - 9G7	415
145	Nail Distribution (Variation and Length) - 9G7	416
146	Bolts - 9G8	420
147	Eyes - 9G8	420
148	Gate Hooks - 9G8	421
149	Hinges - 9G8	421
150	Keys - 9G8	422
151	Padlocks - 9G8	422
152	Pintles - 9G8	423

153	Staples - 9G8	424
154	Washers - 9G8	424
155	Nail Distribution (Variation and Length) - 9G8	425
156	Bolts - 9G9	428
157	Clevis Pins - 9G9	429
158	Door Locks - 9G9	429
159	Door-Lock Tumblers - 9G9	430
160	Eyes - 9G9	430
161	Gate Hooks - 9G9	431
162	Hinges - 9G9	432
163	Keys - 9G9	433
164	Padlocks - 9G9	433
165	Pintles - 9G9	434
166	Screws - 9G9	435
167	Shutter Dogs - 9G9	435
168	Sliding Bolts - 9G9	436
169	Staples - 9G9	436
170	Thumb-Latch Bars - 9G9	437
171	Thumb-Latch Catches - 9G9	437
172	Washers - 9G9	438
173	Nail Distribution (Variation and Length) - 9G9	439
174	Bolts - 9G10	443
175	Nail Distribution (Variation and Length) - 9G10	444
176	Clevis Pins - 9G44	445
177	Keys - 9G44	445
178	Screws - 9G44	446

179	Thumb-Latch Handles - 9G44	446
180	Nail Distribution (Variation and Length) - 9G44	447
181	Nuts - 9G45	448
182	Pintles - 9G45	448
183	Nail Distribution (Variation and Length) - 9G45	449
184	Nail Distribution (Variation and Length) - 9G47	450
185	Screws - 9G48	451
186	Nail Distribution (Variation and Length) - 9G48	452
187	Eyes - 9G57	453
188	Nail Distribution (Variation and Length) - 9G57	454
189	Nuts - 9G11	457
190	Door Locks - 9G11	457
191	Door-Lock Lock Bolts - 9G11	458
192	Eyes - 9G11	458
193	Hinges - 9G11	459
194	Rivets - 9G11	459
195	Staples - 9G11	460
196	Thumb-Latch Lift Bars - 9G11	461
197	Washers - 9G11	461
198	Nail Distribution (Variation and Length) - 9G11	462
199	Bolts - 9G12	467
200	Nuts - 9G12	467
201	Door Locks - 9G12	468
202	Eyes - 9G12	468
203	Gate Hooks - 9G12	469
204	Hinges - 9G12	469

205	Rivets - 9G12	470
206	Screws - 9G12	470
207	Sliding Bolts - 9G12	471
208	Thumb-Latch Bars - 9G12	471
209	Thumb-Latch Catches - 9G12	472
210	Washers - 9G12	472
211	Nail Distribution (Variation and Length) - 9G12	473
212	Nail Distribution (Variation and Length) - 9G42	475
213	Door Locks - 9G54	476
214	Nail Distribution (Variation and Length) - 9G54	477
215	Nail Distribution (Variation and Length) - 9G55	478
216	Nail Distribution (Variation and Length) - 9G56	479
217	Nuts - 9G13	481
218	Door Locks - 9G13	481
219	Eyes - 9G13	482
220	Hinges - 9G13	482
221	Pintles - 9G13	483
222	Washers - 9G13	483
223	Nail Distribution (Variation and Length) - 9G13	484
224	Bolts - 9G14	488
225	Nuts - 9G14	489
226	Eyes - 9G14	490
227	Hinges - 9G14	490
228	Screws - 9G14	491
229	Screw Nails - 9G14	492
230	Staples - 9G14	492

231	Thumb-Latch Bars - 9G14	493
232	Washers - 9G14	493
233	Nail Distribution (Variation and Length) - 9G14	494
234	Bolts - 9G15	497
235	Nuts - 9G15	498
236	Door Locks - 9G15	499
237	Door-Lock-Key Escutcheons - 9G15	500
238	Gate Hooks - 9G15	500
239	Hinges - 9G15	501
240	Keys - 9G15	503
241	Padlocks - 9G15	503
242	Rivets - 9G15	504
243	Screws - 9G15	504
244	Sheeting - 9G15	505
245	Shutter Dogs - 9G15	505
246	Sliding Bolts - 9G15	506
247	Staples - 9G15	507
248	Thumb-Latch Bars - 9G15	507
249	Thumb-Latch Catches - 9G15	508
250	Thumb-Latch Handles - 9G15	508
251	Nail Distribution (Variation and Length) - 9G15	509
252	Door-Lock Keepers - 9G17	514
253	Hinges - 9G17	514
254	Pintles - 9G17	515
255	Nail Distribution (Variation and Length) - 9G17	516
256	Bolts - 9G18	519

257	Nuts - 9G18	519
258	Clevis Pins - 9G18	519
259	Hinges - 9G18	520
260	Staples - 9G18	520
261	Nail Distribution (Variation and Length) - 9G18	521
262	Thumb-Latch Catches - 9G19	523
263	Nail Distribution (Variation and Length) - 9G19	524
264	Nail Distribution (Variation and Length) - 9G20	526
265	Bolts - 9G21	528
266	Gate Hooks - 9G21	528
267	Hinges - 9G21	528
268	Keys - 9G21	529
269	Pintles - 9G21	530
270	Screws - 9G21	530
271	Sliding Bolts - 9G21	530
272	Staples - 9G21	531
273	Thumb-Latch Handles - 9G21	531
274	Nail Distribution (Variation and Length) - 9G21	532
275	Bolts - 9G22	536
276	Door Locks - 9G22	536
277	Eyes - 9G22	537
278	Hinges - 9G22	538
279	Pintles - 9G22	539
280	Staples - 9G22	539
281	Shutter Dogs - 9G22	540
282	Nail Distribution (Variation and Length) - 9G22	541

283	Door Locks - 9G23	544
284	Door-Lock Lock Bolts - 9G23	544
285	Eyes - 9G23	544
286	Hinges - 9G23	545
287	Pintles - 9G23	545
288	Shutter Dogs - 9G23	546
289	Staples - 9G23	546
290	Washers - 9G23	546
291	Nail Distribution (Variation and Length) - 9G23	547
292	Nail Distribution (Variation and Length) - 9G40	549
293	Nuts - 9G24	551
294	Hinges - 9G24	551
295	Padlocks - 9G24	552
296	Pintles - 9G24	552
297	Screws - 9G24	553
298	Staples - 9G24	553
299	Thumb-Latch-Bar Guides - 9G24	554
300	Washers - 9G24	554
301	Nail Distribution (Variation and Length) - 9G24	555
302	Bolts - 9G25	558
303	Nuts - 9G25	559
304	Gate Hooks - 9G25	559
305	Hasps - 9G25	559
306	Hinges - 9G25	560
307	Pintles - 9G25	560
308	Screws - 9G25	561

309	Sliding Bolts - 9G25	561
310	Staples - 9G25	562
311	Thumb-Latch Catches - 9G25	563
312	Thumb-Latch-Bar Guides - 9G25	563
313	Washers - 9G25	563
314	Nail Distribution (Variation and Length) - 9G25	564
315	Bolts - 9G26	568
316	Nuts - 9G26	568
317	Door Locks - 9G26	569
318	Door-Lock Lock Bolts - 9G26	569
319	Door-Lock Tumblers - 9G26	569
320	Eyes - 9G26	570
321	Hinges - 9G26	570
322	Lynch Pins - 9G26	571
323	Rivets - 9G26	571
324	Staples - 9G26	572
325	Thumb-Latch Bars - 9G26	573
326	Washers - 9G26	573
327	Nail Distribution (Variation and Length) - 9G26	574
328	Nail Distribution (Variation and Length) - 9G27	578
329	Staples - 9G29	579
330	Thumb-Latch Catches - 9G29	579
331	Nail Distribution (Variation and Length) - 9G29	580
332	Nail Distribution (Variation and Length) - 9G30	581
333	Nail Distribution (Variation and Length) - 9G33	582
334	Nail Distribution (Variation and Length) - 9G34	583

335	Nuts - 9G37	584
336	Screws - 9G37	584
337	Thumb-Latch Catches - 9G37	584
338	Nail Distribution (Variation and Length) - 9G37	585
339	Sliding Bolts - 9G41	587
340	Nail Distribution (Variation and Length) - 9G41	588
341	Nail Distribution (Variation and Length) - 9G52	589
342	Door Locks - 9G28	591
343	Nail Distribution (Variation and Length) - 9G28	592
344	Nuts - 9G31	594
345	Door Locks - 9G31	594
346	Pintles - 9G31	595
347	Thumb-Latch Bars - 9G31	595
348	Nail Distribution (Variation and Length) - 9G31	596
349	Bolts - 9G38	598
350	Screws - 9G38	598
351	Nail Distribution (Variation and Length) - 9G38	599
352	Bolts - 9G39	602
353	Nuts - 9G39	602
354	Door Locks - 9G39	603
355	Eyes - 9G39	603
356	Hinges - 9G39	603
357	Keys - 9G39	604
358	Pintles - 9G39	604
359	Screws - 9G39	605
360	Staples - 9G39	606

361	Washers - 9G39	606
362	Nail Distribution (Variation and Length) - 9G39	607
363	Nail Distribution (Variation and Length) - 9G43	611
364	Bolts - 9G51	613
365	Nuts - 9G51	614
366	Brackets - 9G51	614
367	Door Locks - 9G51	615
368	Hinges - 9G51	615
369	Keys - 9G51	616
370	Pintles - 9G51	616
371	Screws - 9G51	617
372	Shutter Dogs - 9G51	617
373	Staples - 9G51	618
374	Timber Anchors - 9G51	619
375	Washers - 9G51	619
376	Nail Distribution (Variation and Length) - 9G51	620

Illustrations

Figure		
1	Map Showing the Location of the Fort at Coteau du Lac	7
2	Hasps, Eyes	30
3	Gate Hooks	37
4	Hinges	52
5	Hinges	54
6	Pintles	63
7	Parts of an Open Rim Lock	92
8	Door Locks	94
9	Door Locks	96
10	Door Locks	98
11	Door Locks	100
12	Door-Lock Keepers, Door-Lock-Key Escutcheons, Door-Lock Tumblers, Door-Lock Lock Bolts	102
13	Padlocks, Keys	104
14	Shutter Dogs	113
15	Shutter Dogs	115
16	Sliding Bolts	125
17	Sliding Bolts	127
18	Staples	135
19	Parts of a Thumb Latch	152
20	Thumb-Latch Handles, Thumb-Latch Lift Bars	154

21	Thumb-Latch Handles, Thumb-Latch Lift Bars	156
22	Thumb-Latch Catches, Thumb-Latch Bars, Thumb-Latch-Bar Locks, Thumb-Latch-Bar Guides	158
23	Bolts	175
24	Bolts	177
25	Washers, Rivets, Screw Nails, Nuts	180
26	Lynch Pins, Clevis Pins, Pins, Brackets, Hooks	189
27	Nail Attributes	217
28	Nail Attributes	219
29	Nail Attributes	221
30	Frequency of Lengths for Wrought Nails	223
31	Frequency of Lengths for Nail Variation A2	225
32	Frequency of Lengths for Nail Variation A3	225
33	Frequency of Lengths for Nail Variation A4	227
34	Frequency of Lengths for Nail Variation A5	227
35	Frequency of Lengths for Nail Variation A11	227
36	Frequency of Lengths for Nail Variation A26	227
37	Frequency of Lengths for Nail Variation A31	227
38	Frequency of Lengths for Nail Variation A69	229
39	Frequency of Lengths for Nail Variation A70	229
40	Frequency of Lengths for Nail Variation A78	229
41	Frequency of Lengths for Nail Variation A79	229
42	Frequency of Lengths for Nail Variation A95	229
43	Frequency of Lengths for Nail Variation A96	229
44	Frequency of Lengths for Cut Nails	231
45	Frequency of Lengths for Nail Variation B6	231

46 Frequency of Lengths for Nail Variation B7 231

47 Timber Anchors 289

48 Plan of the Fort at Coteau du Lac 302

49 Door to Powder Magazine in the Octagonal Blockhouse 316

50 Door to Powder Magazine in the Octagonal Blockhouse 318

PREFACE

This study was undertaken as part of a continuing artifact research program of the National Historic Sites Service and also as one segment of the research on the Fort at Coteau du Lac in association with the work done by others on other aspects of the site.

Major excavation seasons were carried out at the site in 1965 and 1966 under the direction of W.J. Folan. A number of short term excavations were also carried out in subsequent years.

The study of the building hardware began in the fall of 1968 with cataloguing of the artifacts. Discussions and initial attempts at different approaches to the analysis were initiated in the spring of 1969 and serious efforts at organization of the data began in August of the same year. Since this was in many ways a first effort, an unusually long time period was required for the various attempts to put the data together. For their contribution at various points in this work I would like to acknowledge the efforts of Virginia Henderson, Bruce Morton, Ernest Tannis, Jane Moussette and Sharon Leach. I would also like to acknowledge the extensive editorial assistance provided by Natalie Stoddard and Jean Brathwaite.

Although many have made their contribution, responsibility for the inadequacies and shortcomings of the final product must remain with the author.

Chapter 1

INTRODUCTION

The Site

The Fort at Coteau du Lac, Quebec (site 9G) is located in the present village of Coteau-du-Lac on the left bank of the St. Lawrence River overlooking the Coteau rapids (Fig. 1). The importance of this location had been based on the need for a transshipment point and canal to bypass the rapids. At times throughout its history there has also been the necessity for a military presence, reflecting in additional construction for fortification and defence. The construction history of the site has been presented elsewhere (Folan and Ingram 1972) but for present purposes it can be described in terms of four general periods.

The first period centres on establishment of the site, beginning in 1779 with the construction of warehouses for the transshipment of goods westward and followed almost immediately, in 1780, by construction of a canal. An emphasis on defence during the period from 1780 to 1783 also probably accounted for the erection of additional buildings, to accommodate troops stationed there. Following 1783, until the outbreak of war in 1812, there appears to have been little construction activity. A contemporary account of 1792 records the buildings as being in a

deteriorated condition and use of the facilities reduced. Repairs were apparently being done only on buildings actually in use.

The second period begins with the outbreak of war in 1812 when the site became important for the shipment of all military goods and supplies on the St. Lawrence and, consequently, was fortified and stationed with troops. Extensive new construction was initiated in 1813 and continued until 1815, after the war had terminated.

The third period extends from the completion of construction in 1815 to the late 1830s. The immediate post-war period saw a return to an emphasis on transportation of non-military material and within a few years the site appears to have had no military significance. As a consequence, improvements were concentrated on the canal, in part to accommodate the larger boats being developed. Only one new building appears to have been erected, as a replacement for another which had deteriorated beyond use. The unrest of the 1830s provided a brief revival of military importance and occupation but construction may have been restricted to the building or repair of gun platforms. It is not known definitely whether the gun platforms used during this time were new ones or those left from period II.

The fourth period extends from the termination of hostilities in the 1830s to the end of the site's history. After 1858 it was leased to a variety of private individuals

as its importance both as a transportation and military site declined. In the 1860s a sawmill was built on the canal. In 1870 two buildings were destroyed by fire and in 1872 all remaining buildings, except the mill but including those burned two years earlier, were sold by auction and removed from the site. The mill was removed in 1889 and although the site continued to be used for some time after it is unlikely that any new construction took place.

The first two periods would be of greatest importance here since they account for almost all buildings on the site. Only one building was erected during period III, which may also have seen the construction of gun platforms, and only one building was erected during period IV. The majority of new construction, alteration and repair were done by the British military. Detailed information for a building will be introduced, if necessary, during discussions of the individual operations.

The Artifacts

Items selected for consideration have been grouped under the general heading of building hardware. Hardware, as a general term, can be used to designate the majority of metal artifacts recovered from excavations in historical archaeology, exclusive of specialized categories such as coins and buttons. Building hardware consists of the

various fastenings used in holding a building together and the various devices for the operation of its closures such as doors, windows and shutters.

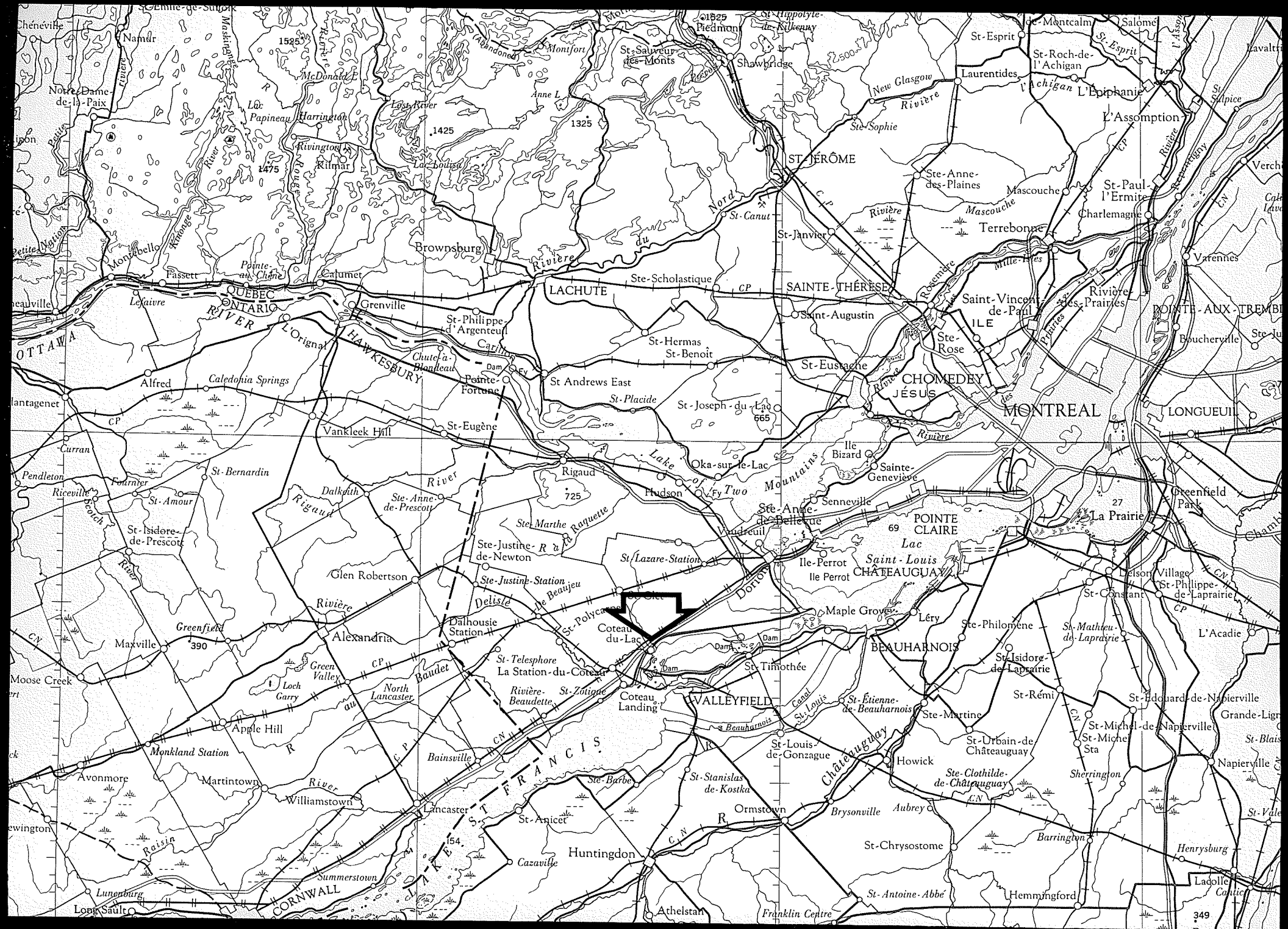
Specific items such as some hinge forms and gate hooks which have been considered may also find application elsewhere but have been included on the basis of their recovery from a site involving extensive building. Their inclusion may be seen as a recognition of their potential rather than actual use although it is likely that most if not all would, in fact, have been used as building hardware.

The Study

It is the intention of this report to consider all recognizable items of probable building hardware from the Fort at Coteau du Lac in an effort to achieve several objectives. The initial objective will be to provide a record of all items considered, organizing them into manageable and meaningful units with definitions for such units and tabulating such information for ease of reference in any present discussion or future comparative studies. This will be accompanied by discussion of the history and significance of the units chosen which will in turn reflect the state of available references for comparison. From this will follow a discussion of the individual operations, in the light of the artifacts they have produced, in an attempt to provide additional information on the buildings

concerned and/or technology of the period, as compared with information available from other sources. Its most lasting contribution, however, may lie in the initial objective which is to provide a body of data, in some detail, for comparison as work on collections from other areas and time periods is undertaken. In addition this report will also represent an attempt at a method of presenting such a body of data.

1 Map showing the location of the Fort at Coteau du Lac (Section taken from Sheet 31 S.E., Ottawa-Montreal, Surveys and Mapping Branch, Department of Mines and Technical Surveys, 1971. Scale 1:500,000).


Chéneville
Namur
Notre-Dame-de-la-Paix
Lac Papineau
Harrington
McDonald L.
Lost River
Anne L.
Rivington
Kilmar
Lac Louise
Piedmont
St-Hippolyte-de-Kilkenny
St-Sauveur-des-Monts
Monfort
Shawbridge
St-Esprit
de-Montcalm
Salomé
St-Roch-de-l'Achigan
Laurentides
L'Epiphanie
L'Assomption
St-Sulpice
New Glasgow
Ste-Sophie
ST-JÉRÔME
Ste-Anne-des-Plaines
Mascouche
St-Paul-l'Ermite
Charlemagne
Terrebonne
Verchères
St-Canut
St-Janvier
Brownsburg
Rivière du Nord
Montebello
Fassett
Pointe-au-Chêne
Calumet
QUEBEC
ONTARIO
Lefaivre
Grenville
OTTAWA RIVER
L'Orignal
HAWKESBURY
Chute-à-Blondeau
Carillon Dam
Ste-Scholastique
LACHUTE
SAINTE-THÉRÈSE
Saint-Augustin
Saint-Vincent-de-Paul
ILE
Ste-Rose
Rivière des Prairies
POINTE-AUX-TREMBLES
Boucherville
St-Philippe-d'Argenteuil
St-Hermas
St-Benoit
St-Eustache
CHOMEDEY
JÉSUS
MONTREAL
LONGUEUIL
Alfred
Caledonia Springs
Pointe-Fortune
St Andrews East
St-Placide
St-Joseph-du-Lac
Vankleek Hill
St-Eugène
Curran
Pendleton
Fournier
Riceville
St-Bernardin
St-Amour
St-Isidore-de-Prescott
Scotch River
Rigaud
Dalkeith
Ste-Anne-de-Prescott
Rigaud River
Rigaud
Lake of Two Mountains
Oka-sur-le-Lac
Hudson
Ile Bizard
Sainte-Geneviève
Senneville
Ste-Anne-de-Bellevue
Vaudreuil
POINTE CLAIRE
Lac Saint-Louis
CHÂTEAUGUAY
Ile-Perrot
Ile Perrot
La Prairie
Greenfield Park
Ste-Marthe
Rivière Raquette
Ste-Justine-de-Newton
St-Lazare-Station
Glen Robertson
Ste-Justine-Station
Rivière Delisle
Rivière de Beaujeu
St-Polycarpe
Dorion
Maple Grove
Léry
Ste-Philomène
St-Mathieu-de-Laprairie
L'Acadie
Delson Village
St-Philippe-de-Laprairie
St-Constant
Greenfield
Maxville
390
Alexandria
Dalhousie Station
Coteau-du-Lac
BEAUHARNOIS
St-Isidore-de-Laprairie
St-Timothée
St-Telesphore
La Station-du-Coteau
Green Valley
Loch Garry
North Lancaster
Rivière Baudet
Moose Creek
Rivière-Beaudette
St-Zotique
Coteau Landing
VALLEYFIELD
Canal St-Louis
St-Étienne-de-Beauharnois
Ste-Martine
St-Rémi
St-Edouard-de-Napierville
Grande-Ligne
St-Michel-de-Napierville
St-Michel
Sta
Apple Hill
Monkland Station
Bainsville
St-Louis-de-Gonzague
St-Urbain-de-Châteauguay
Howick
Châteauguay River
Ste-Clothilde-de-Châteauguay
Sherrington
Napierville
Avonmore
Martintown
Williamstown
Lancaster
Ste-Barbe
St-Stanislas-de-Kostka
Ormstown
Brysonville
Aubrey
St-Chrysostome
Barrington
Henrysburg
St-Valentin
St-Anicet
Huntingdon
Cazaville
Raisin River
Summerstown
Lunenburg
Long Sault
CORNWALL
St-Antoine-Abbé
Hemmingford
Ladolle
Athelstan
Franklin Centre
1525
1425
1325
1475
1625
1500
725
665
154
27
69
349

Chapter 2

BUILDING HARDWARE RESEARCH: PROBLEM AND POTENTIAL

The subject of building hardware is relevant to both the historical archaeologist and the restorationist and its research should be a matter of some concern to both professions. The historical archaeologist is most often involved with buildings or their remains during his excavations and some consideration of the building hardware recovered should contribute to a better and more complete interpretation of the building's remains. The restorationist, on the other hand, is concerned with the restoration or reconstruction of historic buildings and should be interested in the subject of hardware to provide him with data on the correct hardware to use in his work.

The lack of published material by either of these professions, however, suggests a general lack of interest. Some exceptions exist, such as the work of Fontana and Greenleaf (1962), Fontana (1965) and Larrabee (1968) in archaeology or Nelson (1968) in restoration, but these do not constitute the concerted and sustained effort necessary to accumulate and assess the quantity of data required for an adequate job.

The inadequacy of reports on building hardware has already been considered in some detail in an earlier

discussion (Priess 1972). Generally the archaeologist provides little more than an inventory of inadequately described artifacts if he bothers to acknowledge the presence of building hardware at all. The restorationist occasionally appears to go about his business leaving the impression that there is no need to consider the question of building hardware since he already knows the answers. These answers are derived from his previous experience but they also remain largely undocumented.

The historical archaeologist who may have an interest in the study of building hardware must at present concentrate his attention on references outside of his own profession or that of the restorationist. Such references may provide answers to some of the questions on the subject and they also provide a point of departure toward more adequate research. Examples of such references would be the work of Sonn (1928), Mercer (1924; 1960) or Streeter (1954; 1970; 1972) or the variety of 18th and 19th century encyclopaedias and technical dictionaries. The latter group provides more information on the general history and technology of the subject than on the specific products of the technology.

The study of building hardware from a site can make its contribution to the interpretation of the site or any of its buildings. The detail of description and interpretation achieved for a complex of four subterranean

prison cells at Lower Fort Garry, Manitoba (Folan and Priess 1972) may be taken as an example of the results which can be achieved.

Building hardware can provide data on the structural nature of a building. The presence of some kinds of hardware may suggest specific forms of construction. The presence of building hardware in some quantity would initially suggest the presence of a building. This conclusion would also be supported in many instances by other kinds of evidence but in a disturbed area a concentration of hardware may be the only remaining evidence for a building's location.

In interpreting the building hardware from a site it must be assumed that the majority of it is related to the construction of the buildings on that site and it must be further assumed that it is also related to the construction of the specific building in which it was excavated. Supplementary data on the history of the site would also have to be considered to validate such an assumption for each site or building location. The identification of a building as a blacksmith's shop, for instance, would not allow all of the building hardware found to be attributed to that building.

Building hardware can also contribute information for the dating of a building, either in relative or absolute terms. The question of dating is, however, complex because

of the many factors which have to be taken into consideration. The history of a building involves more than one construction event and each event could contribute different kinds of hardware. The initial construction of a building would usually be the source of the majority of the hardware present and the kinds of hardware used would be determined by selection of hardware available which would be influenced by a variety of economic, social and other factors. Hardware available at one site may not be available at the same time at another site and an awareness of the factors which may influence the selection must be maintained. During its history a building may also be changed by alteration, repair or expansion, using hardware of a different time period and possibly having a different range of forms.

The use of hardware for dating of buildings must also be accompanied by precautions relating to the development and distribution of new technologies. The development of any new technology need not be accompanied by its immediate and widespread distribution with the consequence that all products of the older technologies are supplanted in a very short time. Such a stand was taken by Mercer (1924) for example when he stated that cut nail technology replaced hand forged nails by 1800 and the presence of hand forged nails in any building meant a date prior to 1800. In her study of the distribution of technological innovation in

England from the beginning of the 11th century to the end of the 19th century, Hodgen has demonstrated the fact that new technologies do not spread extensively and thoroughly. In the nine centuries covered by the study it was discovered that some form of technological innovation had taken place in only 18 per cent of the parishes whereas in the remaining 82 per cent no technological innovation had taken place (Hodgen 1952). A new technology should be seen as providing an alternative method of manufacture and alternative products for use. In time new products will spread geographically, becoming more popular and replacing the products of earlier technologies to a greater or lesser extent. During the transition the new products will gain in frequency of use but this frequency will again decrease as another new product, introduced through another new technology, increases its frequency of use. For the Fort at Coteau du Lac, which occupies a transition period in the manufacturing techniques for some of the hardware types, some variations will increase in frequency whereas others decrease. Throughout all this, it must also be kept in mind that the technology of hand forging can also survive to provide an alternative mode of production for any item which may be required and the presence of a hand forged artifact cannot serve as an indication for an early date.

At present the historical archaeologist involved in the research of building hardware is confronted with the fact

that he has little to refer to as a precedent for his work and little suitable comparative documentation with which he can supplement and expand his own discussions and interpretations. His research must begin at an earlier stage, that of establishing suitable techniques and compiling the necessary data. As this work progresses the quantity and quality of comparison can be expanded. The immediate need, however, is to establish the means for artifact description suitable for present purposes as well as future comparisons. The present report is an attempt in this direction, representing an early effort rather than a well developed method.

Chapter 3

THE ARTIFACTS

Introduction

The majority of artifacts have been considered at two levels of analysis and grouped into categories on the basis of two differing sets of criteria. The initial grouping is into units based on similarity of intended use. These units are also discussed within the context of larger groups, such as closure hardware and fastenings, based on general similarities in intended use. The units based on use are further divided into groups based on recognizable similarities and differences in manufacture and form. To facilitate discussions which follow, the term "type" will be applied to categories based on differences in use. Categories based on differences in manufacture and form will be referred to as "variations". In this manner, the use of either term will immediately identify the level of grouping intended in a discussion. The use of the terms "type" and "form" is based on standard dictionary definitions and is not bound to any specialized archaeological connotations.

The definition provided for each type is not a reflection of any specific source but is instead an attempt to provide a statement which will allow an item to be assigned to one category or another without question. The definitions are

also an attempt to avoid some of the confusion existing in the documentary sources, such as the use of the terms nail and spike to designate categories of the same general form and use.

Descriptions of individual artifacts, including their placement within the system of types and variations plus metric and unique characteristics, have been tabulated to provide a detailed record of building hardware from the site. The present discussions will concentrate on providing definitions of types and variations, including comments on history, manufacture, possible applications and the significance of the distribution of the variations within any type. The comments on the history of a type or the development of its technology occasionally includes data of considerable antiquity which is not of direct relevance to the period of historical archaeology in North America but provides a brief overall historical perspective for the artifact category.

The types are grouped into three major categories and the types within each are listed alphabetically. Historical data for the site has again been derived from Folan and Ingram (1972).

In describing the variations certain terms have been used frequently and these should possibly be clarified at the outset. The term bar is used in reference to the stock used in the manufacture of an item and does not designate a

specific part of an object. Bars are relatively long pieces of metal which are shaped into the form of the object. The term shank, on the other hand, is used in referring to a specific part of an object. For a nail, for instance, the shank is the part between the head and the point.

Manufacture

Three general techniques of manufacture have been considered: wrought, considered synonymous with hand forged, cast and machine made. A detailed consideration of manufacturing techniques and workmanship would reveal that such a three part differentiation is at a very general and simplistic level and overlooks a great variety of complicating factors, such as discussed by Pye (1968).

Hand forging is a process of manufacture carried out by the individual workman (who could also be called a craftsman if he were well versed in the techniques of such manufacture), requiring a considerable degree of manual skill, deriving much of its power from the individual himself and with an emphasis on the use of hand tools. Mechanical aids may also be available. It is a process "using any kind of technique or apparatus, in which the quality of the result is not predetermined, but depends on the judgement, dexterity and care which the maker exercises as he works" and which has been referred to as the "workmanship of risk" (Pye 1968: 4). This is a process

which can also be carried out in a factory like situation where many craftsmen are employed within a building in the production of similar objects. It is often the case that the individual is responsible for every step in the making of an object, in contrast to assembly line production where each person makes his contribution but is not involved in all of the steps required for the final product.

The general process of hand forging can involve a variety of operations such as bending, folding, riveting, welding, grinding, filing, cutting, thinning, spreading, upsetting, and others. For some of these operations it is necessary to have the metal heated to render it plastic whereas for others the work can be done on the cold metal. Welding refers here to forge welding in which the items to be joined are first heated then placed together in the proper relationship and beaten with a hammer until the weld is completed (Winterton 1961).

When the material is iron, the designation wrought, as a type of manufacture, does not necessarily identify the material as wrought iron, a ferrous metal containing a small amount of carbon (0.02 per cent to 0.03 per cent) and silicious slag (Aston and Story 1936: 1 ff). Hammering and rolling of the wrought iron in the smelting and refining process have produced a fibrous or laminated structure through stretching and drawing of the slag inclusions into long thin lenses. Further working by the craftsman in the

manufacture of items also contributes to accentuating this fibrous structure by further drawing of the inclusions. In archaeological specimens, rusting will often emphasize structure through differential deterioration resulting in surfaces with many parallel ridges and grooves. However, for this collection the designation of material as wrought iron has not been used.

Wrought objects can be identified through several features of their gross morphology. Rusting will accentuate the structure of the metal and often show how it has been worked and altered to produce the required shape. The metal appears to flow into constrictions and around bends. Wrought objects also show a considerable degree of irregularity in form. Items which were presumably intended to be equivalents will, however, not be identical. Surfaces intended to be smooth may be slightly irregular, reflecting the individual hammer blows required in manufacture of the object. Joints are often forge welded or riveted. The products of hand forging may be considered to be the result of "moderately free" workmanship as discussed by Pye (1968). It will also be noted that wrought items will bend rather than break under stress although they may break under extreme stress.

Although there are several techniques for casting, the only one relevant to the collection involves the pouring of molten metal into a mold which has been prepared from a model of the desired object. Through repetition of the

process using the same model, a series of identical objects can be produced.

Cast iron objects cannot be forge welded and, thus, if any joints are required they must be made with bolts or rivets, possibly incorporating non cast parts to improve the arrangement. Often joints are avoided by casting an item in one piece. Objects will also break under stress with little or no bending. Identifying characteristics are a gritty surface, occasionally with a number of small pits from rusting. Improper casting may result in small air holes on the surface or interior, which can be further accentuated by rusting. A small number of cast objects are of brass. The manufacture has been determined through a surface texture similar to that of cast iron objects and an absence of joints. Some items of cast brass have also undergone additional shaping through some form of hand forging.

Machine manufacture involves operations similar to hand forging but also the extensive use of machinery and non manual sources of power. The use of hand tools is also considerably reduced. The result of such manufacture is a product displaying a high degree of uniformity within a group of equivalent objects, surfaces are smooth, lines regular, bends more uniform, and holes more regularly circular. Forge welds do not occur frequently and when they do they are probably worked to the point where they are barely discernible.

The designation of manufacture provided here refers only to manufacture of the object and does not indicate anything about manufacture of the stock used in the process. In many instances, these processes of smelting and refining are either obliterated by later working of the material or not easily recognizable except through microscopic analysis.

The significance of recognizing the three general types of manufacture lies in the historical sequence they provide for the artifacts being considered. As outlined here, this sequence applies primarily to the subject of the general study. A more complete discussion would involve considerably more detail and complexity. It must also be noted that, although the sequence has a general validity, specific dates and events vary from one group of artifacts to the next.

Generally, hand forging is the earliest form of manufacture and for some time may have been the only one known. Casting as an early process of the individual manufacturer, rather than mass production, may also have been known but is not a matter of concern here. Although hand forging is not considered a process of mass production, the large number of available craftsmen were usually able to provide the hardware demanded by the user. The introduction of mass production was, however, responsible for introducing extensive changes in building techniques and

ultimately requiring considerably larger quantities of some categories of hardware.

The large number of individuals involved in wrought manufacture can also be considered as a major cause of the extensive variation in form noted for many objects. Each person working to his own ability and imagination could easily produce items slightly different from those of any other. Individual initiative can account for noticeable differences and also for some of the problems of identification. Limitations in the range of form for any item or group would be the ability of the individual and the preferences of his customers.

Ultimately hand forging was supplemented and finally largely replaced by the techniques of casting and machine manufacture involving more extensive sources of power and allowing for production in greater quantities. A usual consequence was goods which were cheaper and eventually better. These changes in production also precipitated changes in the demand for some categories of hardware, resulting in an extensive increase in the quantity of situations in which some types of hardware were required. Mass production by machine methods may at times have been preceded by periods during which hand forging was carried out in a factory like situation, as a form of mass production.

Machine manufacture represents only a very small proportion of the total items in the collection and, although, it occurs in contexts which could be 18th century it is likely that it did not achieve any importance until the following century. In some instances, an item is similar in form to variations still available on the present market and may, in fact, be a more recent intrusion. Machine manufacture is a major source of present hardware types.

Specific details of manufacture and the relationships of the major processes will be provided in the discussions of types and variations since some differences exist from one group to the next. In considering types it should also be emphasized that definitions apply primarily to items in the collection. They are not intended to be exhaustive although in some instances they will also be adequate for further studies. A general, more inclusive, discussion must await research on other collections. However, it is also likely that future additions and modifications will not exclude any item from the group to which it has been assigned here.

Types and Variations

Closure Hardware

The term closure is used here to designate any item or device which is used to provide a means of closing, either permanently or temporarily, any opening in a structure. Closures include such things as doors, windows or gates and closure hardware is the hardware required for their operation and security.

Eyes

Description

As used here, the term eye designates a closed loop at or near the end of a metal bar or body and which is used for attaching or hooking objects. The loop may be produced either by bending the end of a bar to the required shape or by punching a hole in the end of a bar. For the former the loop is closed either by butting the end of the bar on itself or overlapping the end of the bar with the remainder and forge welding it into place. Its definition as an item of building hardware is intended to apply only to those situations where it is not a part of some other object such as a gate hook.

Eyes can have a variety of applications both within a building and elsewhere. Consequently, items which have come under consideration need not have been used in a building, although they could have. In some cases an

incomplete specimen may be part of some object which employs an eye at some point but cannot be identified because of the fragmentary nature of the artifact. From the collection of artifacts for the site it has been possible to establish possible uses for some of the forms but in the majority of cases this has not been possible. For instance, it is known that some gate hooks use a certain form of eye for attachment but its presence, by itself, does not automatically allow for an association with a gate hook.

Variations

Variation 1 (Fig. 2e)

Manufacture: wrought

Form: A circular bar bent in the middle to form the eye and the remainder forge welded together for a shank, with a washer riveted to the end

Eye: tear drop shape

Shank: circular; non taper

Washer: flat; square

Attachment: riveted

Use: Its use as part of a mooring ring, and thus not part of building hardware, is a strong possibility.

Variation 2 (Fig. 2f)

Manufacture: wrought

Form: A rectangular bar bent in the middle to form the eye and the remainder of the bar forge welded together

Eye: circular

Shank: rectangular/square; tapered; becoming rounded and threaded toward the end

Attachment: bolted

Variation 3 (Fig. 2g)

Manufacture: wrought

Form: A rectangular/square bar with one end bent into a loop for the eye

Eye: circular or tear drop shaped; bar tapered slightly

Shank: tapered; chisel point

Attachment: driven

Use: Possibly associated with a gate hook although such a designation is neither definite nor exclusive.

Variation 4 (Fig. 2h)

Manufacture: wrought

Form: A rectangular bar with an eye punched at one end; other end not represented at present

Eye: circular; bar widens at this point

Shank: non tapered

Variation 5 (Fig. 2i)

Manufacture: wrought

Form: A rectangular bar with one end looped into an eye; other end not represented at present

Eye: bar has been reduced in width with the end lapped with the shank and forge welded into place; circular

Shank: non taper on the part which is present

Variation 6 (Fig. 2j)

Manufacture: possibly machine made

Form: A circular bar bent into a loop for the eye at one end; other end not complete at present

Eye: tear drop shape; end of bar butts on shank

Shank: non taper on the part which is present

Variation 7 (Fig. 2k)

Manufacture: wrought

Form: A circular bar with one end bent into a loop for the eye; other end not represented at present

Eye: tear drop shape; bar has been tapered and butts on shank

Shank: non taper for part of its length, eventually tapered as it reaches a point; point not present

Attachment: possibly driven

Variation 8 (Fig. 2m)

Manufacture: wrought

Form: A circular bar with one end bent into a loop for the eye; other end not represented at present

Eye: tear drop shaped; end of bar butts on shank

Shank: non tapered; broken at a constriction although purpose of construction cannot be established

Variation 9 (Fig. 2n)

Manufacture: wrought

Form: A circular bar bent in the middle to form an eye and the remainder forge welded together for the shank

Eye: tear drop shape

Shank: rectangular square tapered; sharp point

Attachment: driven

Variation 10 (Fig. 2o)

Manufacture: wrought

Form: A circular bar with one end bent into a loop for the eye; other end not represented at present

Eye: bar has been flattened on two sides and tapered on the other two; end butts on shank; circular

Shank: non taper

Use: Form of the eye suggests a specialized application although its nature or range cannot be indicated. Possibly intended as a pin with the eye serving for attachment to a chain.

Variation 11 (Fig. 2p)

Manufacture: wrought

Form: A rectangular bar with one end bent into a loop for the eye; other end possibly not represented

Eye: Bar has been worked into a circular cross section and bent into loop; end laps with shank

and is forge welded into place; circular

Shank: non taper; three holes for attachment; holes countersunk on one surface; end may have been broken

Attachment: with fastenings

Distribution

There appears to be a concentration in areas designated period II although the large quantity in 9G4 is largely responsible for this impression (Table 1). The one possible machine made variation occurs only in areas of period I.

2 Hasps: a, variation 1 (9G6A1-124); b, variation 2 (9G4C5-40) c, variation 3 (9G5A1-164); d, variation 4 (9G25E1-41). Eyes: e, variation 1 (9G3C4-30); f, variation 2 (9G5C5-18); g, variation 3 (9G4B6-87); h, variation 4 (9G6E2-141); i, variation 5 (9G6G2-90); j, variation 6 (9G8R1-47); k, variation 7 (9G9D3-24); m, variation 8 (9G26E1-15); n, variation 9 (9G5D2-28); o, variation 10 (9G4D7-163); p, variation 11 (9G23C1-30). (NHSS RA-744 B)

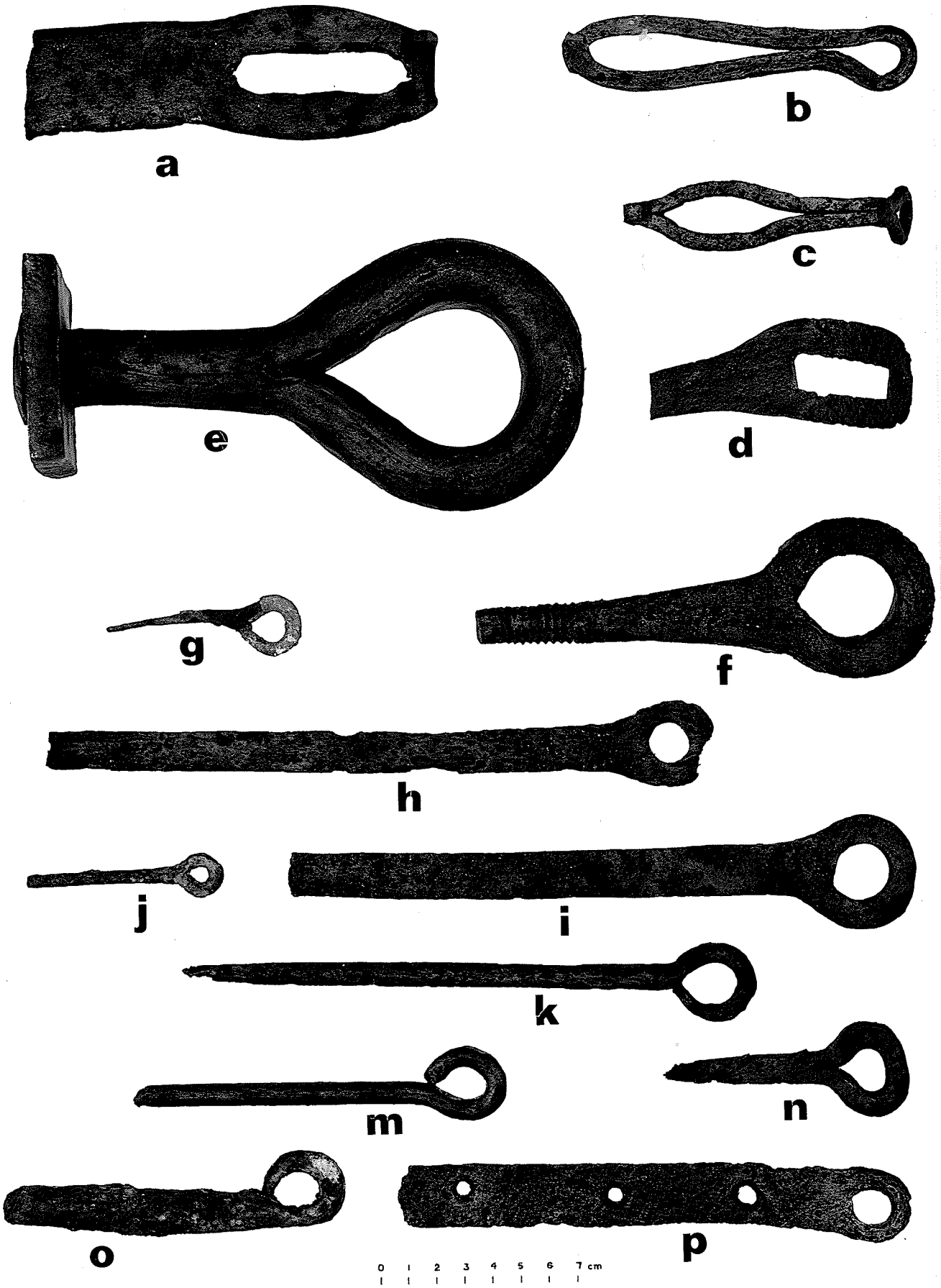

a
b
c
d
e
f
g
h
i
j
k
m
n
o
p
0 1 2 3 4 5 6 7 cm

Table 1	Eye Distribution - 9G																
Variation / Provenience	1	2	3	4	5	6	7	8	9	10	11	Ind					Total
9G3	1		2														3
9G4		1	3							1		2					7
9G5		1										1					2
9G6			2	2	1												5
9G8						1											1
9G9			1				1										2
9G11						1											1
9G12												1					1
9G13												1					1
9G14					1												1
9G15			1														1
9G22	1																1
9G23											1						1
9G26					1			1									2
9G39									1								1
9G57												1					1
Total	2	2	9	2	3	2	1	1	1	1	1	6					31

Gate Hooks

Description

A gate hook is a restraining or closure device consisting of a bar with a hook at one end and an eye at the other. In use the eye end is attached by one loop with the hook engaging with a second loop. The loop with which the gate hook is attached and about which it pivots is referred to as a pivot eye or staple and the loop with which the hook engages is designated as the catch eye or staple. A gate hook serves to hold a door, or similar device, either in an open or closed position; providing relatively minor control over the operation of any opening with which it is associated.

The designation should not be considered as an exclusive association with a gate and some other designation would probably be in order to avoid confusion on the question of use. It can be used on a variety of the openings such as doors, windows and shutters.

Manufacture in this collection is either by hand forging or machine. The majority from the collection are hand forged with no cast examples being identified, although they may exist on other sites. At present it is not possible to suggest any dates associated with the different manufacture other than that hand forging obviously preceded machine. The beginning period of machine manufacture is not known.

Variations

Variation 1 (Fig. 3a)

Manufacture: wrought

Form: A rectangular bar tapered at one end and bent into a hook with other end looped into an eye

Hook: rising; sharp point; terminates with a slight curve

Eye: centred; edges of bar bevelled to approximate a circular cross section; end of bar lapped with shank and forge welded into place

Variation 2 (Fig. 3b)

Manufacture: wrought

Form: A rectangular bar tapered at one end and bent into a hook with other end looped into an eye

Hook: rising; edges bevelled, approaching a circular cross section; sharp point; terminates with a slight curve

Shank: edges bevelled irregularly

Eye: centred; edges of bar bevelled, approaching a circular cross section; bar tapered slightly; end of bar butts on shank

Variation 3 (Fig. 3c)

Manufacture: wrought

Form: A square bar tapered at one end and bent into a hook with other end looped into an eye

Hook: rising; edges of bar bevelled, approaching a circular cross section; sharp point; terminates with a slight curve

Shank: edges bevelled

Eye: centred; edges of bar bevelled, approaching a circular cross section; bar slightly tapered; end of bar butts on shank

Variation 4 (Fig. 3d)

Manufacture: wrought

Form: A rectangular/square bar tapered at one end and bent into a hook with other looped into an eye

Hook: flat (non rising); edges of bar bevelled; approaching a sharp point; terminates with a moderate curve

Shank: edges bevelled

Eye: centred; edges of bar bevelled; bar slightly tapered; end of bar butts on shank

Variation 5 (Fig. 3e)

Manufacture: wrought

Form: A circular bar tapered at one end and bent into a hook with other end looped into an eye

Hook: rising; approaching a sharp point; terminates with a slight curve

Eye: centred; bar tapered; end of bar butts on shank

Variation 6 (Fig. 3f)

Manufacture: machine made

Form: A circular bar with one end bent into a hook and other end looped into an eye; associated with a pivot eye

Hook: rising; tapered only near end; approaching a sharp point; terminates with a slight curve

Eye: centred; end of bar butts on shank and it is attached

Pivot eye: a circular bar with an eye identical to eye on gate hook at one end and other end threaded as a screw; bar not tapered except at end of thread; sharp point.

Distribution

All but one were found in areas of a building and that one was found in the vicinity of a building (Table 2). The one machine made form is from an area designated period I.

3 Gate Hooks: a, variation 1 (9G3C4-33); b, variation 2 (9G25B1-24); c, variation 3 (9G4A11-43); d, variation 4 (9G12D2-92); e, variation 5 (9G15Z1-358); f, variation 6 (9G7J1-95). (NHSS RA-693 B)

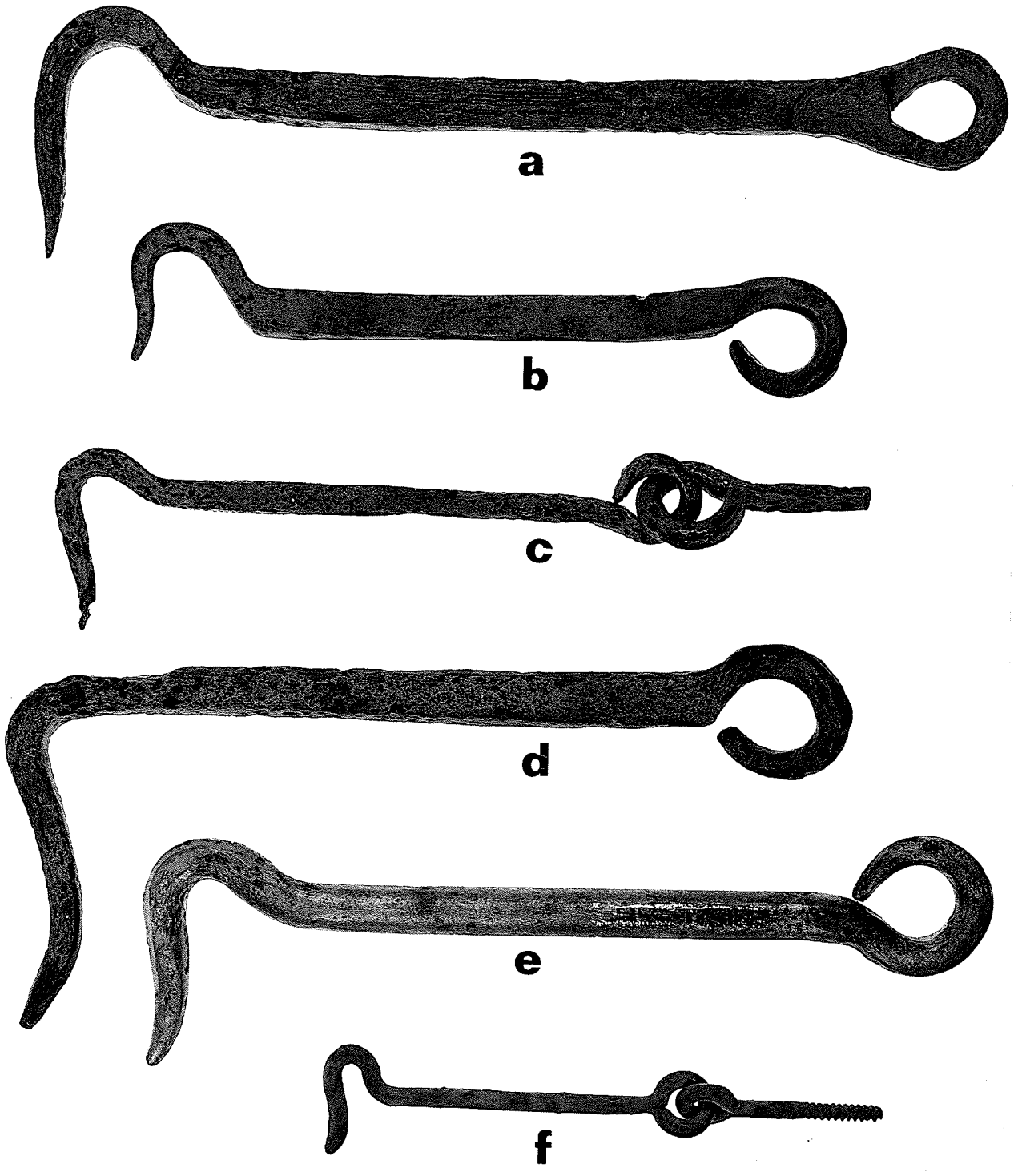

a
b
c
d
e
f
0 1 2 3 4 5 6 7 cm

Table 2	Gate Hook Distribution - 9G																	
Variation / Provenience	1	2	3	4	5	6	Ind											Total
9G3	2						1											3
9G4			2		1													3
9G7						1												1
9G8					1													1
9G9							1											1
9G12				1														1
9G15			1		1													2
9G21					1													1
9G25		1																1
Total	2	1	3	1	4	1	2											14

Hasps

Description

A hasp is a closure device consisting of a strap or strap-like device attached at one end, with an allowance for pivoting, and with a hole at or near the other end. This hole is passed over a loop, such as a staple, and held in place by a pin through the loop. When attached to a door, the loop would be on the frame and a linking of the two would hold the door closed.

Control of a door is varied for a hasp. In all cases, it is only possible to operate the hasp, that is, remove the pin and remove the hasp from the loop, from one side of the door. Operation can be further restricted through use of a padlock.

A hasp consists of at least two separate pieces, the strap and the loop it fits over. This does not take into consideration those hasps which are not a part of building hardware, such as on trunks, which could be slightly different in form. The end of the strap which is permanently attached may have a hole with a staple through it, attached to the wood of the door, or it may be like a double strap butt hinge with one strap fastened and the other free to pivot. The effect of a strap can also be created with a bar of metal bent to have the majority of its two arms parallel, and possibly forge welded together. The two ends are joined, and a loop left at either end of the object.

In this case attachment would be with a staple through one of the end loops. Other forms, known to exist but not represented in the collection, are attached to the surface of a door and pivot with the door.

Variations

Variation 1 (Fig. 1a)

Manufacture: wrought

Form: A strap with a linear hole at the closure end; other end not represented at present

Closure end: hole has been constructed by splitting end of strap, spreading the two arms to form the hole and then rejoining the ends by forge welding; end rolled forward

Shank: edges rounded on one surface only

Variation 2 (Fig. 1b)

Manufacture: wrought

Form: A rectangular bar bent in the middle to form a loop for the pivot end, the two arms then parallel each other for a distance and are again spread and rejoined to form a loop for the closure end

Closure end: elongate tear drop shape hole; end probably rolled forward although complete evidence for this is not available

Shank: two arms parallel each other but are apparently not welded together

Pivot end: tear drop shape hole

Variation 3 (Fig. 1c)

Manufacture: wrought

Form: Construction is similar to that of Variation 2 in being of a rectangular bar bent to form the pivot and closure ends

Closure end: biconvex shape hole; end rolled forward

Shank: two arms of the bar parallel each other and are forge welded together

Pivot end: tear drop shape hole

Variation 4 (Fig. 1d)

Manufacture: wrought

Form: A strap with a hole punched in one end for the closure end; other end not represented at present

Closure end: rectangular with rounded ends; end of strap rounded

Distribution

Only a small number are present and represented in periods I - III (Table 3). Only one specimen is attributed to period III.

Table 3	Hasp Distribution - 9G																
Variation / Provenience	1	2	3	4													Total
9G4		1															1
9G5			1														1
9G6	1																1
9G25				1													1
9G32			1														1
Total	1	1	2	1													5

Hinges

Description

A hinge is a jointed device serving to link two objects while allowing the one to move, relative to the other, in an arc perpendicular to the long axis of the joint. In general, it consists of three basic elements one attached to each of the two objects and a third connecting these two while providing for the necessary movement. In practice, the latter may be an integral part of either of the former or a separate entity. The two former elements are also known as the sides whereas the link is some form of pin.

Hinges can be of a variety of material, both metal and non-metal. Use of wood and leather is known but are not likely to survive in an archaeological context. Those considered here are all of metal with the majority being iron.

On a building hinges are used on doors, windows, shutters, and other similar closures. Size may, on occasion, provide some suggestion for an application other than on a building.

Hinges can be of two general forms determined by the relationship of the two sides when seen in a plan view. The sides can be either offset from each other or meet in approximately a straight line. The former is designated an offset hinge and the latter a butting hinge. On butting hinges the ends or edges of each side, at the joint, are

shaped into one or more loops with gaps between them to mesh with the loops of the other side. A pin passing into or through all of these loops serves to hold them together and form the joint. In describing such hinges each loop is designated a part and the description includes mention of the number of parts in a complete item.

Hinges can be made by any of the three types of manufacture, which are also all represented in the collection. The majority here are hand forged, a smaller number being cast, and with only a very small number being machine made. The first application of casting to the manufacture of hinges is not known although a date of 1775 has been suggested (Mercer 1924: 178). The first British patent for cast iron hinges was registered on October 3, 1775 by Messrs. John Izon and Thomas Whitehouse and is described as being for "casting hinges ready jointed, or with false knuckles or joints and pins, in cast iron" (Woodcroft 1969: 297) (the name Whitehouse is occasionally also given as Whitehurst [Mercer (1924); Kenrick (1967: 103)]). It is, however, likely that this is not the first instance of cast iron hinges, the wording of the patent suggests it to be an improvement on an existing technology. A similar suggestion or implication can be drawn from Kenrick's statement (1967: 103) that "this invention for casting hinges was for joining the two halves or flaps of the hinge in the casting, instead of casting them separately

and fitting them together afterwards". This form of hinge made its first appearance in the U.S.A., at least, immediately after the revolution, in 1783, and apparently spread rapidly (Mercer 1924: 178; Hommel 1944: 3). It is, thus possible that cast iron hinges were available during most or all of the construction activities at the site.

The beginning of machine manufacture for hinges appears to have begun in the second quarter of the 19th century. Woodcroft (1969) lists a number of British patents for hinges from 1802 to 1845 but the specifications for these are too brief to allow adequate identification of manufacture. Tomlinson (1852: Vol. II, 16) lists a patent for 1839 and Martineau (1967: 610) suggests a date "about the year 1840" for the beginning of such manufacture. Machine manufacture is the predominant method for present day hinges.

Although casting can produce a variety of forms, the ones considered here are all of the butting variety, having the appearance of a rectangular plate in plan view. These were intended to be let into the edge of the door or door frame, thereby causing the two sides to be together when the door was shut and leaving no space for projecting fastening heads. Although nails with suitable heads were available, Mercer (1960: 259) sees this situation as being a major incentive for an increase in the production of wood screws, having flat countersunk heads which would sit flush with the surface of the hinge. Hinges of such design were

at one time characterized as "lamentably weak... reduced to a minimum in size, and kept out of sight" "as if they were something to be ashamed of" (Eastlake 1872: 129, 141) but have become the predominant form in present day construction.

Cast hinges are recognized through the general features of casting already outlined. In some instance it also appeared as if the loops for each side had been cast as a solid piece with the hole for the pin drilled out subsequently after the two sides had been lined up. Others have no indication of a pin at either end and could have been produced by methods similar to those patented by Izon and Whitehouse (Woodcroft 1969: 297, 611) or described by Hommel (1944).

Variations

Variation 1 (Fig. 4a)

Manufacture: cast

Form: butting; three-part; rectangular; three to five holes per side; holes countersunk on either one or both sides

Variation 2 (Fig. 4b)

Manufacture: cast

Form: butting; two-part; rectangular; two to three holes per sides; holes countersunk only on front

Variation 3 (Fig. 4c)

Manufacture: cast

Form: butting; five-part; rectangular; three to five holes per side; holes countersunk on one or both sides

Variation 4 (Fig. 4d)

Manufacture: machine made

Form: butting; three-part; T - strap; three or more holes per side; holes countersunk on front

Variation 5 (Fig. 4e)

Manufacture: wrought

Form: butting; three-part; double strap; two or more holes per side; end of loop either butts on hinge or is lapped and forge welded; ends of both sides not represented at present

Variation 6 (Fig. 4f)

Manufacture: wrought

Form: butting; three-part; rectangular; two or more holes per side; double thickness of metal through folding a single sheet and forge welding it together

Variation 7 (Fig. 4g)

Manufacture: wrought

Form: butting; three-part; double strap; two or more holes per side; end of strap rolled, lapped, and forge welded to provide loops; both sides tapered; end treatment not represented at present

Variation 8 (Fig. 4h)

Manufacture: wrought

Form: butting; three-part; H; loops formed by rolling metal, lapping, forge welding, and then cutting it to shape

Variation 9 (Figs. 4i, j)

Manufacture: wrought

Form: butting; three-part; HL; loops formed by rolling metal, lapping, forge welding, and then cutting it to shape

Variation 10 (Fig. 4k)

Manufacture: wrought

Form: butting; two-part; H or HL; loops formed by rolling metal, lapping, forge welding, and then cutting it to shape

Variation 11 (Fig. 5a)

Manufacture: wrought

Form: butting; three-part; rectangular; five holes per side; side diverges from joint with end squared; represented only by one side at present

Variation 12 (Fig. 5b)

Manufacture: machine made

Form: butting; five-part; rectangular; loops formed by rolling metal and butting it; two to three holes per side

Variation 13 (Fig. 5c)

Manufacture: wrought

Form: offset; strap; tapered; loop formed by rolling metal, lapping and forge welding it; three to four holes; tear drop shaped end treatment; possibility of shoulder at beginning of end treatment

Variation 14 (Fig. 5d)

Manufacture: wrought

Form: offset; strap; tapered; loop formed by rolling metal, lapping and possibly forge welding it; three holes; rounded triangular and treatment

Variation 15 (Fig. 5e)

Manufacture: wrought

Form: offset; strap; parallel sided; loop formed by rolling metal and butting it; one or more holes

Variation 16 (Fig. 5f)

Manufacture: wrought

Form: offset; strap; tapered; loop formed by rolling metal, lapping, and forge welding it; circular end treatment; possibility of a shoulder at beginning of end treatment; three or more holes

Variation 17 (Fig. 5g)

Manufacture: wrought

Form: offset; strap; tapered; loop formed by rolling metal, lapping, and forge welding it; end treatment not represented at present; three or more holes.

Variation 18 (Fig. 5h)

Manufacture: wrought

Form: strap; joint is not represented at present; tapered; circular end treatment; five or more holes (possibly the same as Variation 14)

Variation 19 (Fig. 5i)

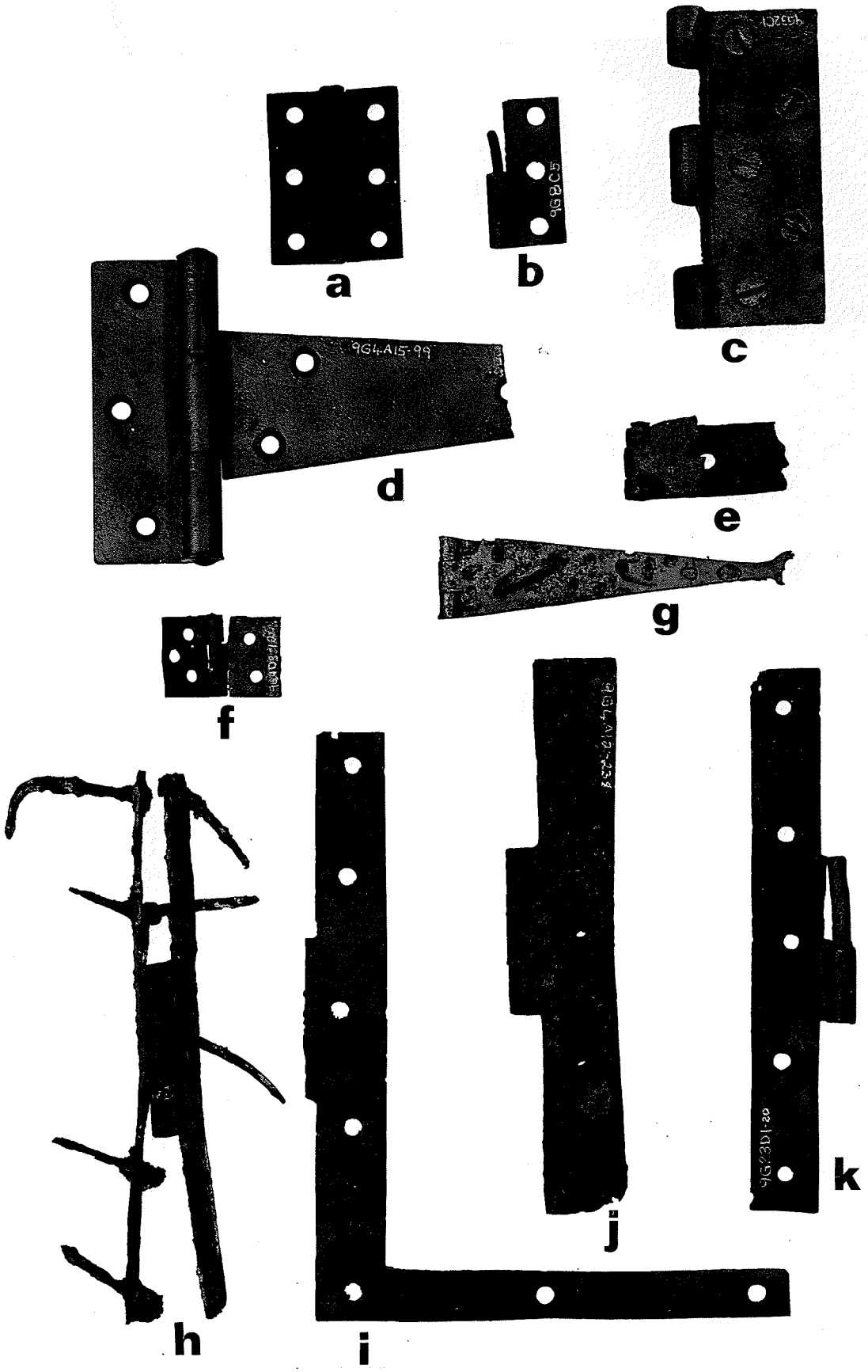
Manufacture: cast

Form: butting; four-part; rectangular; three holes per side; hole countersunk on front

Distribution

All three types of manufacture are represented although wrought and cast predominate. Only two machine made specimens were identified positively and these are from areas of period I and II (Table 4). Even though cast forms were theoretically available for the entire time of construction they do not appear to have gained in popularity until period II. For period I only 13.3% are cast. For period II, 51.4 per cent are cast with the most obvious emphasis in 9G3 where no other type of manufacture is present. The increased use of cast hinges was also accompanied by a decrease in use of the H - HL form, 15 were recovered from areas of period I and only six of period II.

4 Hinges: a, variation 1 (9G3C3-33); b, variation 2 (9G8C5-7); c, variation 3 (9G32C1-65); d, variation 4 (9G4A15-99); e, variation 5 (9G8B1-134); f, variation 6 (9G4D3-124); g, variation 7 (9G4C3-72); h, variation 8 (9G4C14-74); i, variation 9 (9G23C1-32); j, variation 9 (9G4A12-238); k, variation 10 (9G23D1-20). (NHSS RA-748 B)


a
b
c
d
e
f
g
h
i
j
k
0 1 2 3 4 5 6 7 cm

Hinges: a, variation 11 (9G9D1-115); b, variation 12 (9G7A1-181); c, variation 13 (9G4B1-52); d, variation 14 (9G4C8-117); e, variation 15 (9G25A2-75); f, variation 16 (9G17D1-32); g, variation 17 (9G13H1-39); h, variation 18 (9G11V5-34); i, variation 19 (9G4D3-123). (NHSS RA-749 B)

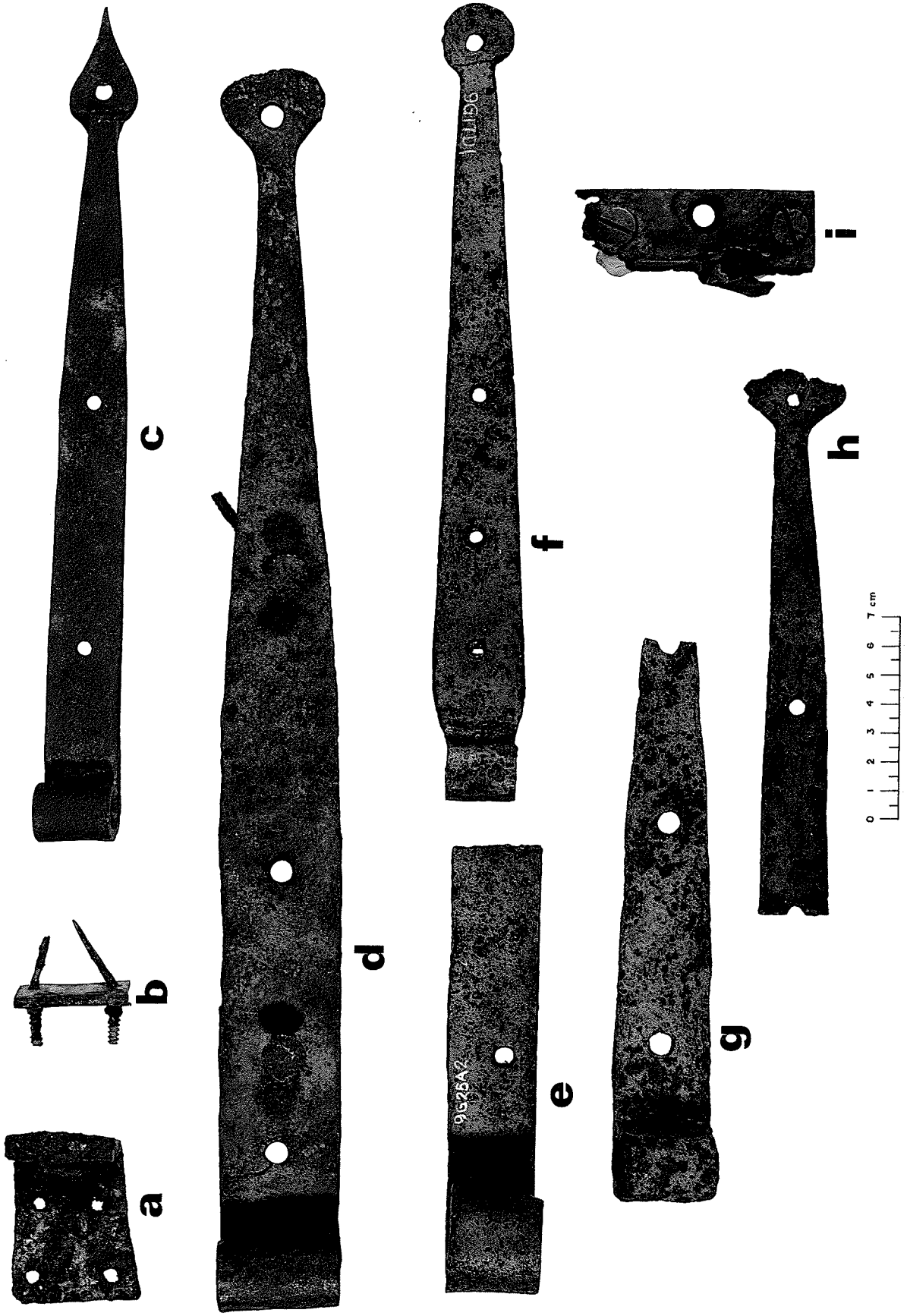

a
b
c
d
e
f
g
h
i
0 1 2 3 4 5 6 7 cm

Table 4	Hinge Distribution - 9G																			
Variation / Provehience	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Ind	Total
9G2	1																				1
9G3	10																				10
9G4	6	3	5	1		2	2	2					3	11		3			1	2	31
9G5									2										2	6	10
9G6	1																			9	10
9G7												1						1		3	5
9G8		1																		2	3
9G9	1										1									4	6
9G11		1												1						1	3
9G12	2																			1	3
9G13																	1			3	4
9G14																				2	2
9G15	5	1			1															5	12
9G17			1													1				1	3
9G18					1																1
9G21	1																				1
9G22	1																			5	6
9G23									1	1					1						3
9G24	1																				1
9G25	1														1						2

Table 4 (cont.) Hinge Distribution - 9G

Provehience \ Variation	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Ind	Total
9G26																				1	1
9G32			1														1			1	3
9G39	1																				1
9G51	2						1														3
Total	33	6	7	1	2	2	3	2	3	1	1	1	3	2	2	4	2	1	1	48	125

Pintles

Description

Usually a pintle is an L-shaped device, consisting of a horizontal body and a vertical pin, attached to the frame of a door or other opening and on which a hinge is hung. They can be attached by being driven, set, riveted to a plate or with fastenings through holes in the body. They are either bent from a single piece of stock or have several pieces forged together to make the two parts, when they are wrought. Alternate forms in which the pin and body are in a straight line or with the pin replaced by a socket are known but do not occur in this collection.

All of the specimens considered are wrought, machine manufacture and casting are known but may be more recent techniques.

Variations

Variation 1 (Fig. 6a)

Manufacture: wrought

Form: pin and shank; one piece; driven

Shank: tapered; sharp point; sides pinched at heel

Pin: edges bevelled, approaching a circular cross section; may taper slightly toward end

Variation 2 (Fig. 6b)

Manufacture: wrought

Form: identical with variation 1 except for chisel point on shank

Variation 3 (Fig. 6c)

Manufacture: wrought

Form: identical with variation 1 except sides of shank are not pinched at heel

Variation 4 (Fig. 6d)

Manufacture: wrought

Form: identical with variation 2 except that sides are not pinched at heel

Variation 5 (Fig. 6e)

Manufacture: wrought

Form: pin and shank; one piece; driven; reinforced heel

Shank: tapered; chisel point; both sides pinched at heel

Pin: edges bevelled, approaching a circular cross section; may taper toward end

Variation 6 (Fig. 6f)

Manufacture: wrought

Form: identical with variation 5 except for a sharp point and an absence of pinching on shank

Variation 7 (Fig. 6g)

Manufacture: wrought

Form: identical with variation 5 except for absence of pinching on shank

Variation 8 (Fig. 6h)

Manufacture: wrought

Form: pin and shank; two-piece construction; driven

Shank: rectangular; tapered; sharp point

Pin: circular; edge at upper end may be bevelled; lower end spread and forged to socket

Variation 9 (Fig. 6i)

Manufacture: wrought

Form: identical with variation 8 except for chisel point on shank

Variation 10 (Fig. 6j)

Manufacture: wrought

Form: identical with variation 9 except for presence of a shoulder on the lower surface of the shank near the socket

Use: Location of shoulder may indicate limit to which it could be driven.

Variation 11 (Fig. 6k)

Manufacture: wrought

Form: pin and shank; two piece construction; reinforced pin; shoulder on lower surface of shank; driven

Shank: rectangular; tapered; point not represented at present

Pin: circular; end bevelled

Reinforcing: continuation of pin below shank; end spread; surface attachment (with a fastening)

Variation 12 (Fig. 6m)

Manufacture: wrought

Form: pin and strap; one piece construction; surface attachment

Strap: parallel sided; squared end; holes for attachment, countersunk on front

Pin: circular

Variation 13 (Fig. 6n)

Manufacture: wrought

Form: identical with variation 12 except for the addition of a triangular end treatment on the strap

Strap: end treatment has two additional holes for attachment

Variation 14 (Fig. 6o)

Manufacture: wrought

Form: pin and plate; one piece construction; surface attachment

Plate: triangular, apex towards heel, rounded basal corners; base notched several times; slightly curved as seen from above

Pin: circular

Distribution

Relatively large quantities occur in buildings of both period I and II (Table 5). As use of rectangular butting hinges, usually intended to be let into the edge of the

door or door frame, increased in frequency there would have been a decline in the use of offset strap hinges and, consequently, also pintles. Mercer (1924: 178) has, however, also suggested that the use of hinges with pintles persisted on shutters and outer doors. From this collection it is only possible to record that the use of hinges requiring pintles appears to have persisted at least through period II.

6 Pintles: a, variation 1 (9G25A2-73); b, variation 2 (9G9M1-14); c, variation 3 (g3G3-58); d, variation 4 (9G4A14-69); e, variation 5 (9G4A9-117); f, variation 6 (9G31C1-46); g, variation 7 (9G23D1-19); h, variation 8 (9G3F1-47); i, variation 9 (9G9B1-82); j, variation 10 (9G4C9-64); k, variation 11 (9G5X2-36); m, variation 12 (9G8C4-23); n, variation 13 (9G864-22); o, variation 14 (9G4B3-232). (NHSS RA-694 B)

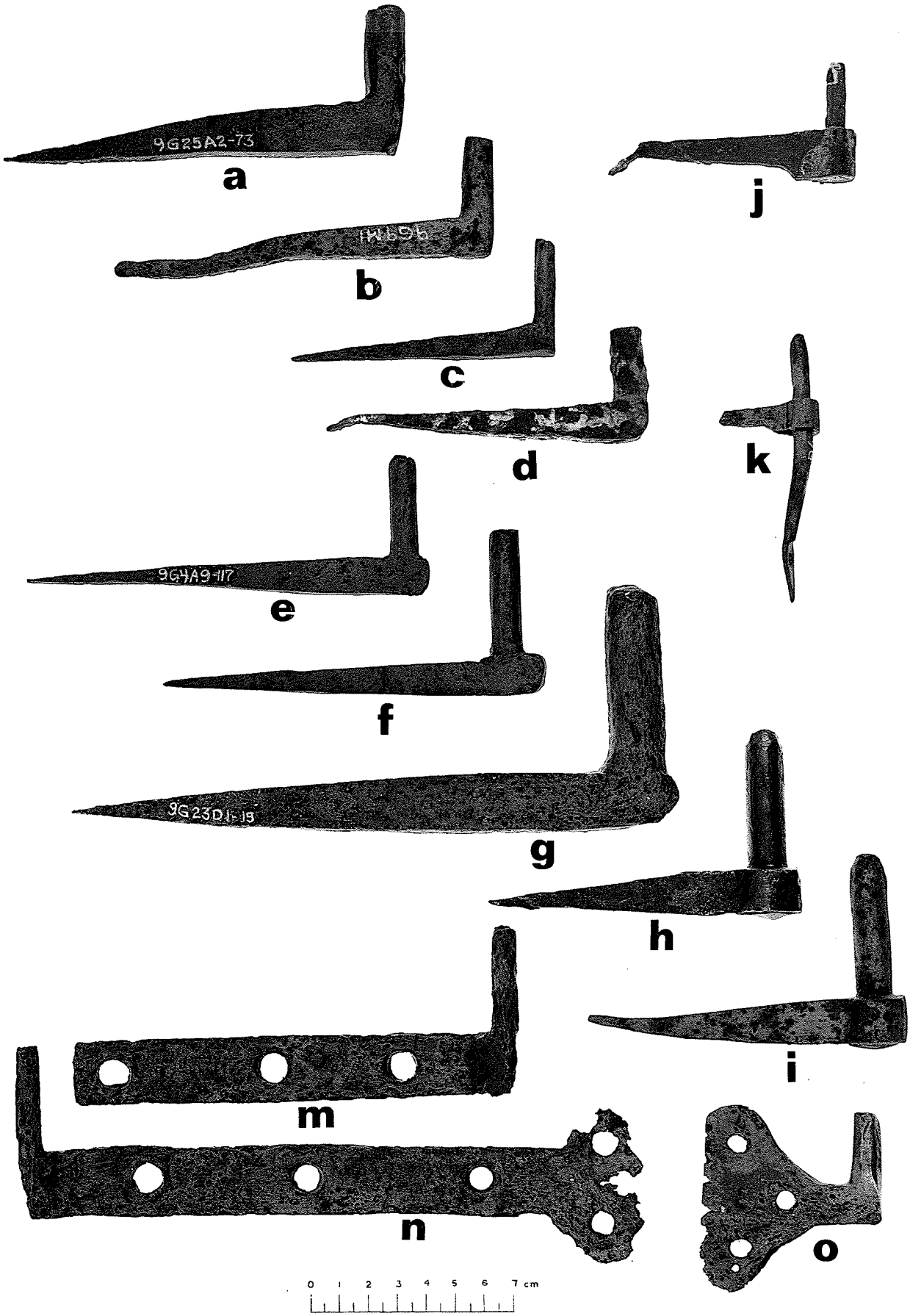

9G25A2-73
a
FW695
b
c
d
j
k
9G4A9-117
e
f
9G23D1-15
g
h
i
m
n
o
0 1 2 3 4 5 6 7 cm

Table 5	Pintle Distribution - 9G																
Variation / Provenience	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Ind		Total
9G3			1			1		2	2								6
9G4	1	3		2	1					1				2	2		12
9G5											1						1
9G6		1							1								2
9G7															1		1
9G8												1	1				2
9G9		2							3								5
9G13		1							2						1		4
9G17															1		1
9G21															1		1
9G22															1		1
9G23			1				1										2
9G24								1									1
9G25	1	1															2
9G31						1											1
9G32		1													2		3
9G39				1													1
9G45															1		1
9G51		1															1
Total	2	10	2	3	1	2	1	3	8	1	1	1	1	2	10		48

Locks

Description

A lock is a closure device serving to secure a door, or similar part of a building, in a closed position by means of a bolt (Fig. 7a) which must be moved, at least in part, with a key. In addition there must be some means of attaching the bolt to the door while concealing the mechanism so as to prevent operation except with the proper key. Such attachment is usually achieved with a housing consisting of at least one plate designated the main plate (Fig. 7b), holding the bolt as well as the remainder of the mechanism. Housings can range from the single plate to one completely closed by a number of plates. An alternative form of lock has all parts of the mechanism let into the surface of a wooden block. In the present collection, none of the latter were located although individual parts from them are present and housings range from the single plate to being incompletely closed, lacking a complete cover plate. For present purposes, these will all be referred to as door locks.

Associated with all door locks there must be some form of catch or hole on the door frame into which the end, or head of the bolt can fit when moved or thrown by the key. Such a catch has been designated a keeper and for all of the door locks under consideration here this would have

been a form of box mounted on the surface of the door frame or a square staple driven into the same surface. It is however, not possible to suggest which of these possibilities would have occurred with the various locks here; both forms occur in the collection.

In addition to the main plate and lock bolt there are also a number of other parts which occur in all of the present locks. Attached to either side of the keyhole, and perpendicular to the main plate, there are plates, referred to as auxilliary plates (Fig. 7c), serving for attachment of other parts.

Wards are additional pieces of metal included in the mechanism to provide complexity or obstacles to prevent the use of any incorrect keys. These can be of several forms. The main ward is a plate parallel to the main plate and attached, at either end, to an auxilliary plate. A collar is a ward encircling the edge of the keyhole in the main ward. Circle wards are similar to the collar but are attached some distance from the keyhole (Fig. 7d). These may be on the main plate, cover plate, or main ward. Pin wards are short pins attached either to the main ward, cover plate, or main plate and serve a similar function to circle wards.

The tumbler (Fig. 7e) is a bar attached near the lock bolt, held in place by a spring (Fig. 7f) and provided with a means of obstructing the movement of the bolt. In use it

must be lifted out of the way by the key before the bolt can be moved in either direction.

Locks may occur in combination with a latch bolt, within the same housing, which is maintained in a thrown position by a spring and serves to hold a door closed without its being locked. Operation is by a handle either from one or both sides of the door. The head of a latch bolt is also bevelled on one side so that it is automatically withdrawn as it moves past the edge of the keeper and then thrown again by the spring. It is also possible for a door lock to be on a door with a thumb latch or other similar but separate item of hardware.

Door locks in the collection can be seen as a small number of general categories. On the other hand they are all similar in being intended for attached to the surface of a door rather than let into its front edge. In terms of housing, three basic forms can be distinguished; those having all parts let into a wooden block, termed a stock lock, those having a mechanism attached to a main plate which is then let into a wooden block, termed a plate stock lock, and those having metal sides attached to the main plate, termed a rim lock.

Padlocks are a portable form of lock, consisting of a fully closed housing and a curved bar or bow, the ends of which can be secured within the housing. In use, at least one end of the bow can be released and passed through a loop before being secured again within the housing. The

interior mechanism shares similarities with that of a door lock but, since no specimens were taken apart, the nature of such mechanisms was not established.

The antiquity of door locks extends over several millenia, being mentioned in Egyptian, Roman and Greek references (E.H. Knight 1876: 1338). Iron locks were apparently in use in England in the late 9th century (Hughes 1957: 100), terms like stock lock appear by the end of the 12th century (Hughes 1957: 100) and plate lock during the 14th century (Salzman 1967: 302). The term rim lock appears in Neve (1726) and, thus, the general forms present in the collection were known for considerable time prior to any construction on the site.

The use of tumblers and wards as means of security in a lock also appear to predate the beginning of construction. The beginning of either system is not known definitely although the impression from some of the 19th century discussions, is that wards predate the modern use of the tumbler (Tomlinson 1852: Vol. II; E.H. Knight 1876). Original use of a tumbler can be attributed to the Egyptians (Tomlinson 1852: Vol. II, 195) but its beginning in Europe is of a more recent, but inconclusive, time. The use of a tumbler was illustrated in Art du Serrurier by Duhamel du Monceau, published in Paris in 1767 as part of the series of Descriptions des Arts et Métiers (mentioned in Price [1856] and E.H. Knight [1876]). Viollet-Le-Duc (1875:

Vol. 18, 324-25) illustrates a lock with a tumbler which is recorded as belonging to a building dating to the end of the 13th century and Price (1856: 246) mentions 16th century locks also having tumblers. However Price (1856: 203, 265), Holland (1833) and others also feel that the use of the tumbler was reinvented by Robert Barron and patented in England in 1778 (Holland lists the date as 1774). Although English patents were being recorded from 1617 (Woodcroft 1969) the first patent for a lock on record is for 1774 (Price 1856: 252) and thus the introduction of tumblers or wards is not recorded by a patent. All of the door locks in the collection have both wards and a tumbler.

The interpretation of specific door locks must remain at a relatively general level. If any are mounted on outside doors they would be on the inside surface of the door, for security, and the door would swing inwards, otherwise the lock would create an obstruction. However, it is not possible to take most locks and state whether they would have been used on the right or left hand side of a door. Observation of early locks on standing buildings, such as at Upper Canada Village, reveal that it was a common practice to mount locks with the keyhole upside down, that is, with the eye of the keyhole inferior to the slot. Illustrations in Viollet-Le-Duc (1875: Vol. 18) also show some locks made to be mounted in this manner, although his examples are French and from an earlier time

period. It may, thus, be possible to take a lock or any of its parts and characterize it as being, or being from, a right hand or left hand specimen but only as seen by the cataloguer in his use of a normal orientation for purposes of description. It is not possible to interpret the same object as having come from the right or left side of a door and thereby provide any statement on the operation of the door.

Variations

Door Locks

Variation 1 (Figs. 8a; 9a; 10a)

Manufacture: wrought

Material: iron

Form: Open rim lock and latch, containing a lock bolt, latch bolt, bolt guide and staple, tumbler, tumbler spring, ward plate, spindle and cam; a latch bolt spring would be included in the total mechanism although it is not represented at present

Housing: rectangular plate bent at right angles at each end to form the main, front and back plate; top and bottom are additional straps attached to the main plate by means of rectangular bars riveted to both; no full cover plate although ward system is protected by a smaller rectangular cover plate; front plate has two rectangular holes

to allow passage of the two bolt heads; key hole in front and cover plates; cover plate attached with two bolts into the front plate and held in position by a lug on each of two auxilliary plates; three holes in the main plate for attachment

Lock Bolt: double throw; constructed of a strap with one end folded several times and forged into a block for the head (faggot welded); sides of tail are parallel although there are several changes in actual width; lower edge of tail, approximately at the centre, has two notches produced by cutting two lugs which have been bent forward at right angles to the tail; the notches engage with the key whereas the lugs engage with the lug on the tumbler; raised shoulder on upper edge near end of tail serves as a stop, as it hits a lug on the bolt guide, to prevent bolt from being thrown beyond a set point; shoulder on lower edge past lugs and notches, produced by a reduction in width, serves as a stop, as it hits a pin riveted to inside of lower bend on staple, to prevent bolt from being withdrawn beyond a set point

Latch Bolt: constructed of a strap with one end folded and forged into a block, bevelled on one

side, for the head; end of tail has a right angle bend toward the main plate followed almost immediately by another right angle bend downward providing a vertical arm to engage with the cam of the spindle and the latch bolt spring

Bolt Guide and Staple: guide consists of a vertical plate, attached perpendicularly to main plate, with the lock bolt riding across its edge; lock bolt is maintained in position by a lug on one end of the guide and a pin riveted to inside of lower bend of staple; latch bolt moves between lug on guide and upper leg of staple; staple is a strap bent into a square arch with both ends bent out at right angles and having a hole in each end; attached to main plate bolts with through holes; staple holds both bolts in position, preventing all undesired movement

Tumbler: bar with one lug perpendicular to main plate; pivoted on one end with other end unattached; resting on a pin attached to main plate; rounded cam along lower edge at point where key makes contact to raise it

Tumbler Spring: strap with one end attached to front plate and other resting on tumbler, near tumbler it pivots

Wards: main wards with pin and collar, wards attached

Latch Bolt Spring: the nature of the lock dictates the presence of such a spring since there is no other way to throw the latch bolt; although it is not represented at present, the screw with which it was attached is situated in the lower right hand corner

Spindle: circular bar, tapering toward either end, passing through housing and to which is attached a bar, or cam; a turn of the spindle moves cam, thereby withdrawing latch bolt; both ends would be provided with a handle, although these are not represented at present.

Variation 2 (Figs. 8b; 9b; 10b)

Manufacture: wrought

Material: iron

Form: Plate stock lock; a housing having only a main and front plate containing a lock bolt, bolt guide, tumbler, tumbler spring, and a ward plate

Housing: trapezoidal main plate, with the narrow end bent at right angles, to produce the front plate; front plate has a rectangular hole to allow passage of the lock bolt head; four holes in main and two in front plate for attachment; protection for ward system is provided by a cover plate; cover plate has a spur, at one corner along upper edge, which is bent to touch

the lock bolt tail and serves to hold it in place; one ward attached to cover plate and one to front plate; cover plate riveted to auxilliary plates with lugs passed through holes in the cover plate; key hole in main and cover plate

Lock Bolt: constructed of a block, for the head, forged to a narrow width tapered tail; lower edge of tail has large projection into which is cut a notch, resulting from a lug being cut and bent at right angles toward main plate; key engages with notch to move bolt and lug engages with lug on tumbler; end of tail bent at right angles toward the front to provide stop as it hits the bolt guide preventing the bolt from being thrown beyond a set point

Bolt Guide: consisting of a small vertical plate attached to the main plate, perpendicular to it, and provided with a flat notch in which the tail of the bolt can slide; tail is maintained in this notch by the spur of the cover plate

Tumbler: bar with one lug perpendicular to main plate; one end is pivoted on pin riveted to main plate and other end rests against a similar pin; rounded cam along lower edge at point where key makes contact to raise it

Tumbler Spring: strap with one end attached to main plate and other resting on tumbler, near tumbler pivot point

Ward: main ward with pin and collar wards attached; circle ward on main and cover plate

Variation 3 (Figs. 8c; 10c)

Manufacture: wrought

Material: iron

Form: Open rim lock; containing a lock bolt, bolt guide, tumbler, tumbler spring, and main ward

Housing: rectangular main plate bent at right angles at each end to produce front and back plates; back plate is not represented at present and front plate is incomplete; front plate has a rectangular hole to allow passage of lock bolt head; top and bottom plates are rectangular straps attached to the main plate with rectangular bars riveted to both; top plate is not represented at present; ward system is protected by a square cover plate, attached by riveting to auxilliary plates; key hole in front and cover plate; three holes in main plate for attachment

Lock Bolt: head consists of a block forge welded to a strap; sides of tail diverge slightly; lower edge of tail has lug cut and bent toward main plate to provide notch for key engagement and lug

for tumbler engagement; end of tail bent at right angles toward main plate and notched to ride on bolt guide

Bolt Guide: horizontal plate attached perpendicular to main plate; end towards head of bolt has a right angle bend which would presumably serve to stop bolt from being thrown beyond a set point

Tumbler: similar to those of door lock variations 1 and 2

Tumbler Spring: similar to those of door lock variations 1 and 2

Wards: presumably a main ward, suggested by presence of hole for attachment in auxilliary plate

Variation 4 (Fig. 8d)

Manufacture: wrought

Material: iron

Form: Possibly rim or plate stock lock consisting of a partial housing, having at present only a main and front plates and, containing a lock bolt and staple; other parts are necessary for a complete lock but are not represented at present

Housing: rectangular main plate with one end bent at right angles for the front plate; presence and nature of back, top, and bottom is not definite; front plate has a rectangular hole to

allow passage of the lock bolt head plus the suggestion of other holes for additional bolts; seven holes in main plate although these need not all be for attachment

Lock Bolt: presumably a rectangular bar which has been flattened and shaped for the various parts of the tail with the head representing the original shape of the bar; sides of tail are non parallel; on the lower edge of the tail, immediately next to the head, there is an asymmetrical rounded projection serving as a stop to prevent the bolt from being thrown beyond a set point; lower edge, near centre of tail, has a rounded notch; key engages with this notch to throw and withdraw bolt; upper surface, near center of bolt, has a small square notch to catch lug of tumbler; small lug on lower edge next to notch for key provides a stop to prevent bolt from being withdrawn beyond a set point

Wards: circle ward on main plate

Staple: squared shape riveted to front plate and serving to guide tail of lock bolt

Use: Attached by fastenings through some of the holes in the main plate.

Variation 5 (Fig. 11)

Manufacture: cast and wrought

Material: brass

Form: Open rim lock, containing a lock bolt, lock bolt guide, tumbler, tumbler spring, wards, and cover plate

Housing: rectangular main plate continuous with both front and back plates, possibly cast as a unit; top and bottom plates are riveted through main plate by means of bars cast as an integral part of each strap; front plate is wider than any of the other sides and has a rectangular hole for passage of bolt head; cover plate held on by bolts into main plate and aligned by lugs on auxilliary plates; keyhole only in cover plate, pin attached to main plate in line with the eye for hollow pin of key; four holes in main plate and two in front plate for attachment

Lock Bolt: appears to have been cast as one piece with some subsequent work to produce final form; notch in lower edge for key engagement, appears to have been cut out after casting; lug for engagement with tumbler projects toward the main plate and is adjacent to the key notch on tail; rectangular slit near end of tail rides on bolt guide and provides a stop for both forward and reverse motion

Lock Bolt Guide: post with lug on top and riveted through main plate

Tumbler: similar to those of door lock variations 1-4 although possibly cast

Tumbler Spring: similar to those of door lock variations 1-4

Wards: full circle on main plate and partial circle on cover plate

Use: Absence of a keyhole in the main plate limits operation to one side of the door, being the side opposite to which the lock is attached and, consequently, it can only be used to lock a door from the outside.

Door Lock Keepers

Variation 1 (Fig. 12a)

Manufacture: wrought

Form: A rectangular box having both ends, one side, and a front; constructed of a flat rectangular strap bent at right angles near either end to form front and both ends; side formed by a flat rectangular strap attached to front by means of two rectangular bars riveted to both straps; an additional metal bar is riveted along leading edge of front to provide a striker plate; two holes in front for attachment

Use: Attached to a door frame by fastenings through the two holes in the front; associated with a door lock

and/or latch.

Variation 2 (Fig. 12b)

Manufacture: wrought

Form: A rectangular box having both ends, one side and a front; constructed of a single flat plate on which two corners have been cut out and the resulting tabs bent at right angles to the plate to produce the side and two ends with the remainder of the plate forming the front; leading edge of front has been rolled forward to provide a striker plate; two holes in front for attachment

Use: Attached to a door frame by fastenings through the holes in the front; associated with a door lock and/or latch.

Variation 3 (Fig. 12c)

Manufacture: cast

Form: A rectangular box having both ends, one side and a front; ends and side slope outward slightly from front to back; a ridge along the inside leading edge of the front and both ends suggests that the object was cast with both sides with one side being removed subsequently to provide the opening required for the lock bolt head; ridge along outside leading edge of front provides a striker plate; two holes in front for attachment

Use: Attached to door frame by fastenings through holes in front; associated with a door lock and/or latch.

Variation 4 (Fig. 12d)

Manufacture: wrought

Form: A rectangular box having both ends, one side and a front; constructed of a rectangular strap bent at right angles near each end; to form the front and both ends; side formed by an additional strap attached to front by means of two rectangular bars riveted to both straps; leading edge of front has been rolled forward to provide a striker plate; two holes in front for attachment

Use: Attached to door frame by fastenings through holes in front; associates with a door lock and/or latch.

Door-Lock Lock Bolts

Variation 1 (Fig. 12h)

Manufacture: wrought

Form: A flat rectangular strap folded over on one end to form a head

Head: flat, rectangular block formed by folding end of strap several times and forge welding it into a block

Tail: parallel sided although it becomes wider on the lower edge approximately half way to the

end; upper edge has two notches cut into it for engaging with the tumbler; wider part has a single notch on the lower edge for engaging with the key

Use: Does not have any similarity with lock bolts from lock variations at the site; an almost identical form is illustrated by Streeter (1970: 225) and a similar form appears in Noël Hume (1970: 247), both identified as belonging to a plain stock lock.

Variation 2 (Fig. 12i)

Manufacture: wrought

Form: A flat, rectangular strap folded on one end to form a head

Head: flat, rectangular block formed by folding end of strap several times and forge welding into a block

Tail: sides diverge slightly; approximately at the midpoint there is a notch formed by cutting a lug and bending it at right angles to the tail; notch serves to catch key and lug engages with tumbler; end is bent at right angles, in same direction as lug and has a notch in the middle to ride on guide plate

Use: Identical with lock bolt of door lock variation 4.

Door-Lock Tumbler

Variation 1 (Fig. 12e)

Manufacture: wrought

Form: A strap with a spur at one end and other end bent into a squared P shape; loop of the P is narrower than the remainder with the change in width occurring abruptly at the beginning of the loop, resulting in a shoulder; similar forms are illustrated by Noël Hume (1970: Fig. 77a-2) and Streeter (1970: Figs. 5, 13, 14) and are identified as for a plain stock lock

Use: Attachment would be by driving the spur into the wood of the housing; shoulder at beginning of loop would engage with notches along the upper edge of the lock bolt tail, as illustrated by Streeter (1970: Fig. 4), and "P" would serve as a cam for the key to work on to lift tumbler out of the way; could have been associated with lock bolt variation 1.

Keys

Variation 1 (Fig. 13e)

Manufacture: wrought

Form: A circular bar with one end shaped into a bow and a bit attached to the other

Bow: oval; formed by splitting the end of the stem, spreading the two halves in opposite directions and then being curved back with the

ends rejoined; rejoining of ends has resulted in a slight bulge on the inside

Stem: circular; possibly encircled by a series of ridges and grooves

Collar: mid bit location

Pin: solid; encircled by a groove at the end

Bit: square; diverging sides; symmetrical; notches for main ward, collar, pin, and circle wards

Use: Location of collar indicates use with a plain stock lock, as illustrated by Streeter (1970: Fig. 9, 11).

Variation 2 (Fig. 13f)

Manufacture: wrought

Form: Similar to variation 1 except for location of collar

Collar: bit end location

Use: Location of collar indicates use with a plate stock lock or rim lock (Streeter 1970: Fig. 9, 10).

Variation 3 (Fig. 13g)

Manufacture: wrought

Form: A circular bar with one end shaped into a bow and a bit attached at other end

Bow: identical with key variation 1

Stem: tapered from bow to bit; ridges and grooves at bow end with a smooth transition from stem to pin

Pin: hollow

Bit: rectangular; parallel sided, irregular curved in end view; asymmetrical notches for wards on front edge only

Use: Hollow pin indicates use from one side of a lock only, possibly a padlock.

Variation 4 (Fig. 13h)

Manufacture: wrought

Form: similar to key variation 3 except for a solid pin

Bit: square; diverging sides; asymmetrical, notches for wards on back edge only

Use: Asymmetry indicates use only from one side of a lock, possibly a padlock.

Variation 5 (Fig. 9i)

Manufacture: cast

Form: A circular bar with a bow at one end and bit at the other

Bow: oval; bulge on interior opposite end of stem

Stem: tapered from bit to bow; encircled by series of grooves near bow

Pin: smooth transition from stem; hollow

Bit: rectangular; curved sides in an end view; notches for wards on front edge only

Variation 6 (Fig. 13j)

Manufacture: wrought

Form: Represented, at present, only by a portion of the bow

Bow: oval; bulge on interior opposite end of stem; as it approaches the stem it is shaped into an additional groove and two ridges, possibly representing a point at which the bow was attached to the split ends of a stem

Door-Lock-Key Escutcheons

Variation 1 (Fig. 12f)

Manufacture: wrought

Form: Flat, elliptical plate; keyhole in center; four holes for attachment, one at each end and one at either side; similar to form found at Jamestown (Cotter 1958: pl. 88 lower)

Use: Attached by fastenings through the holes; associated with a door lock.

Variation 2 (Fig. 12g)

Manufacture: wrought

Form: Flat, biconvex plate; keyhole in center; four holes for attachment, one at each end and one at each side; similar to form found at Jamestown (Cotter 1958: pl. 68 upper)

Use: Attached by fastenings through the holes; associated with a door lock.

Padlocks

Variation 1 (Fig. 13a)

Manufacture: wrought

Form: A housing with a pivoted bow

Housing: riveted construction; consisting of a sheet iron front and back plate separated by a sheet iron side; entire unit assembled with bars riveted to side plate with ends riveted through front and back plates; parabolic shape with interrupted sides, circular pointed lobes and concave upper edge; key hole in front; key hole cover in form of strap riveted to front plate, above key hole; interior mechanism has not been determined although it is known that the key had a solid pin, possibly with a constriction at the end

Bow: circular bar; one end flattened and rolled into a loop for pivoting on a rivet passing through one set of lugs on the front and back plates of the housing; other end flattened and provided with a hole for a catch

Variation 2 (Fig. 13b)

Manufacture: wrought

Form: A housing with a pivoted bow

Housing: construction is identical with that of padlock variation 1; parabolic shape with

uninterrupted sides, round lugs and a straight upper edge; key hole, with attached escutcheon, in front plate; interior mechanism has not been determined although it is known that the pin of the key was hollow and the bit was curved

Bow: identical in construction and form with padlock variation 1

Variation 3 (Fig. 13c)

Manufacture: wrought

Form: A housing with a pivoted bow

Housing: construction is identical with that of padlock variations 1 and 2; double ogee shape with interrupted sides, squared lugs and a concave upper edge; key hole in front plate; key hole cover, in the shape of a row of three circles, riveted to front, above key hole; interior mechanism has not been established; presence of a key in key hole makes it impossible, at present, to establish nature of pin on key

Bow: identical in construction and form with padlock variations 1 and 2

Variation 4 (Fig. 13d)

Manufacture: wrought

Form: Consists, at present, only of a bow

Bow: constructed of a rectangular bar with one end flattened and rolled into a loop to pivot on

a rivet passing from a lug on the front and the back plate; other end flattened and a notch cut in one side for a catch

Use: The nature of lock for which this is intended cannot be specified; it could be similar to any of the above variations but could also be some other.

Distribution

Door lock variations 1 and 2 account for the majority of door locks used on the site and occur in both periods I and II (Table 6). Of the other variations, only one example of each is present although lock bolt variation 2 could suggest presence of a greater number of door lock variation 3. An example similar to door lock variation 2 has been designated "early 19th century" (Noël Hume 1970: Fig. 77b1) although no indication is provided for its initial date or time range. On the other hand, illustrations similar to both door lock variations 1 and 2 appear in a British hardware catalogue presumed to be late 19th century (Winstone & Co. n.d.: 212). Tumbler variation 1 (Table 10) and lock bolt variation 1 (Table 9) are the only evidence for a form of lock which may have occurred only in period I since all but one of the examples of these are from areas designated period I. The lock may have approximated the appearance of one illustrated by Noël Hume (1970: Fig. 77a) although no information is provided for it.

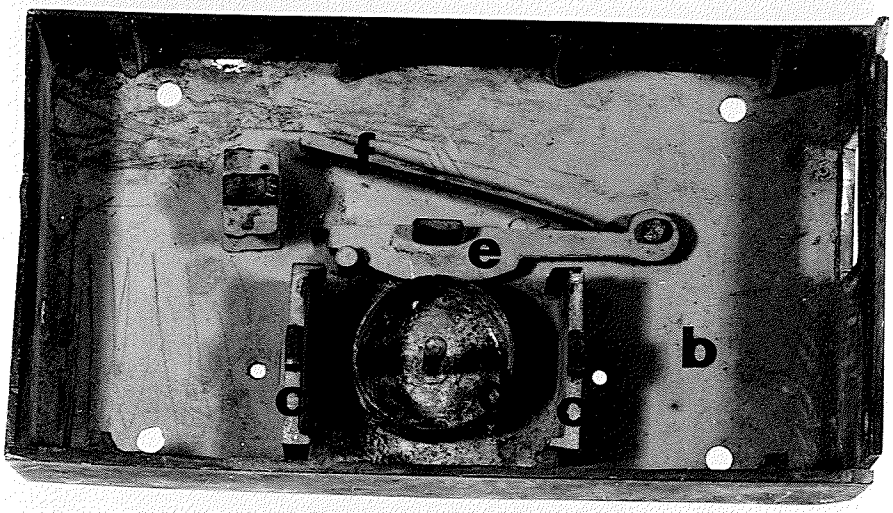
The small quantity of keepers (Table 7) may indicate an extensive use of staples for this purpose. Staple variations 8, 9, or 11 could have served in such a capacity. Thumb latch catch variation 3 may also have been used in a similar application.

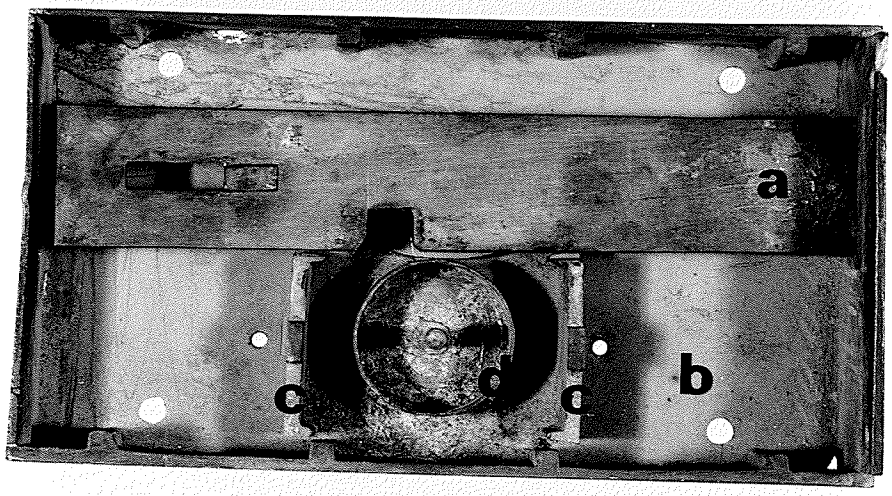
The small quantity of key escutcheons (Table 8) do not constitute an adequate basis for extensive discussion. They occur only in areas designated period II.

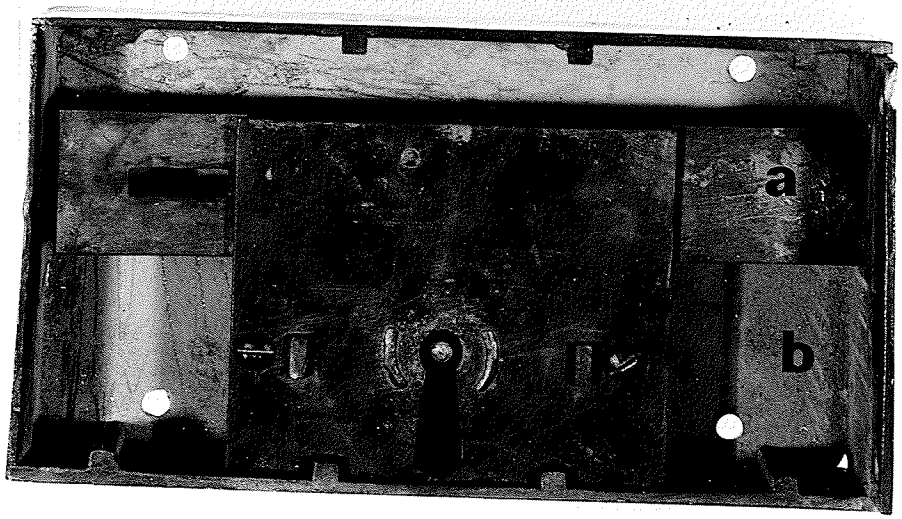
It is likely that key variations 3 to 6 (Table 11) are not intended for door locks. The remainder occur in such small numbers that little discussion can be undertaken.

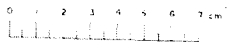
Only a small number of padlocks are present (Table 12) and, from a total of eight, five are from areas of period I. Padlock variation 2 is not included in tabulation since the only specimen so designated was located in 9G1. However, some of the indeterminate items may belong to this variation.

7 Parts of an open rim lock: a, lock bolt; b, housing; c, auxilliary plates; d, circle ward; e, tumbler; f, tumbler spring. (NHSS RA-887 B)

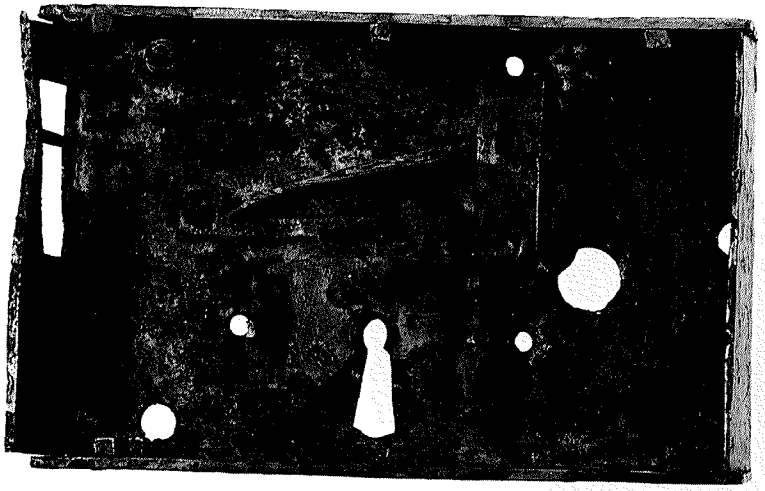

f
e
b
c
c


a
b
c
c
c

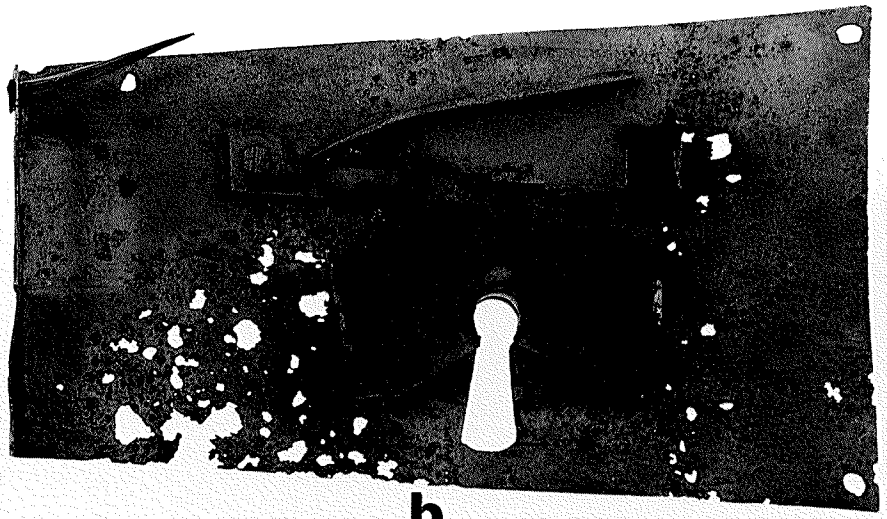

a
b


0 1 2 3 4 5 6 7 cm

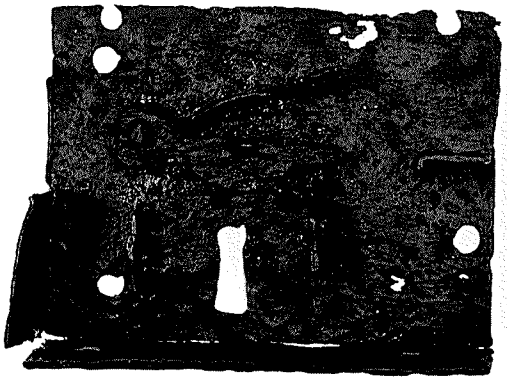
8 Door Locks: a, variation 1 (9G4D3; complete housing with tumbler spring, main ward, and guide staple); b, variation 2 (9G4C3-80; complete housing with tumbler, tumbler spring, and main ward); c, variation 3 (9G39B1-387; incomplete housing with tumbler, tumbler spring, and main ward); d, variation 4 (9G13E1-12; incomplete housing with lock bolt and guide staple). (NHSS RA-704 B)



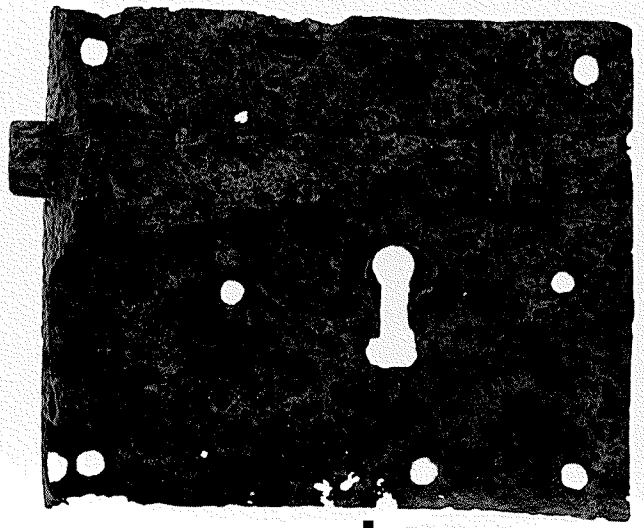
a



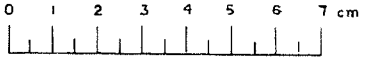
b



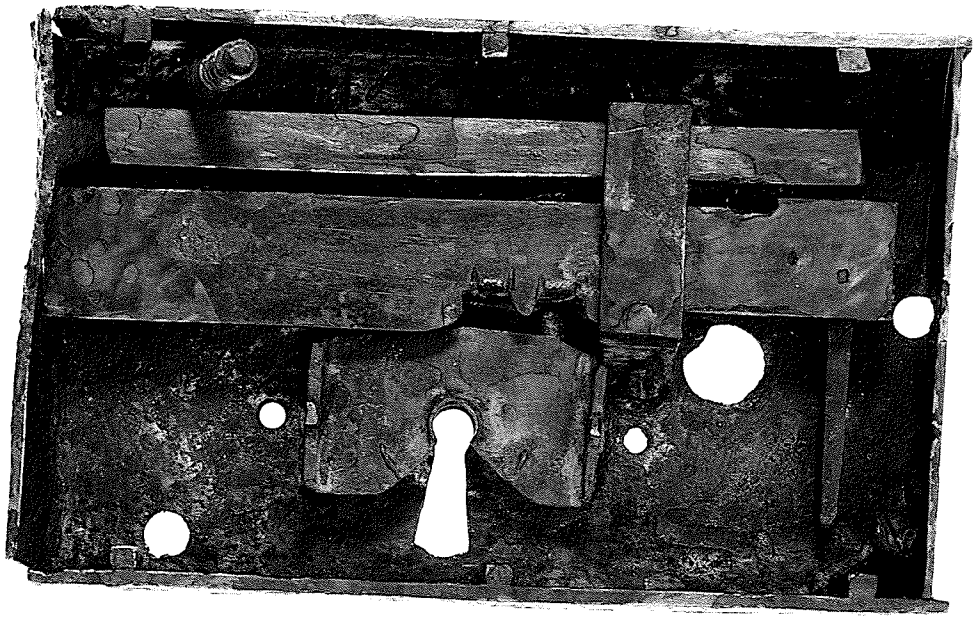
c



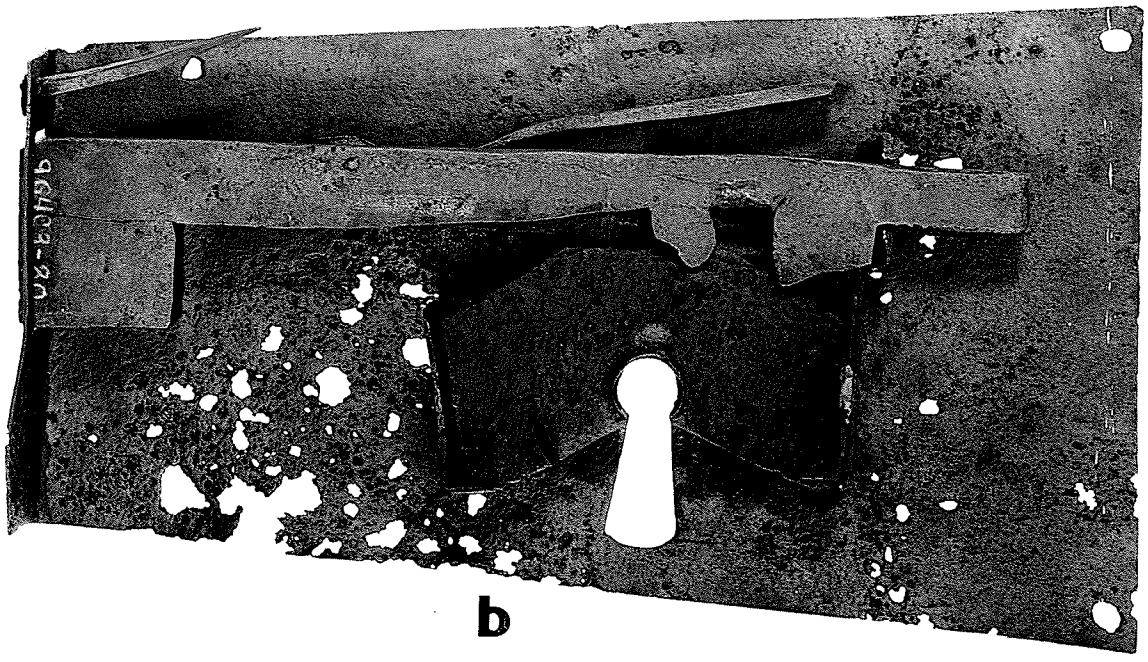
d



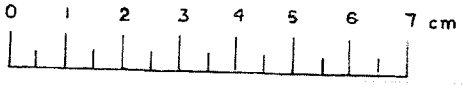
9 Door Locks: a, variation 1 (Figure 8a with addition of latch bolt and lock bolt); b, variation 2 (Figure 8b with addition of lock bolt). (NHSS RA-705 B)



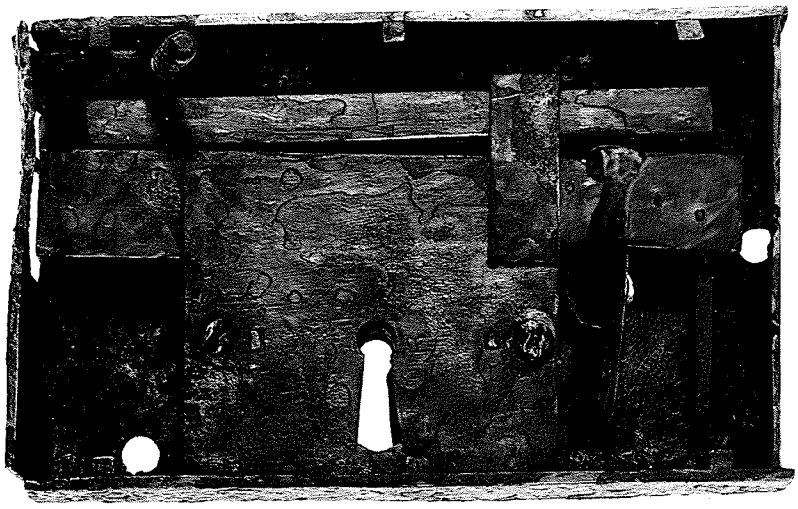
a



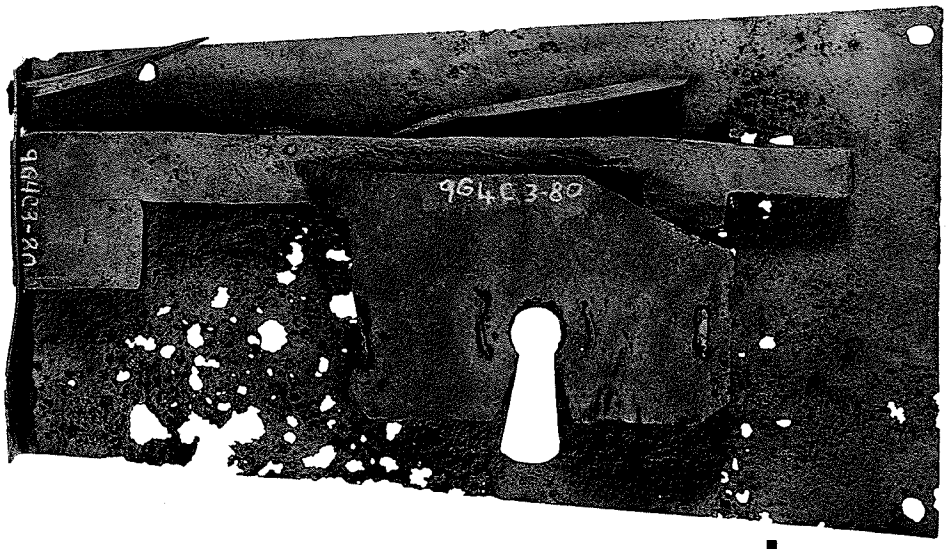
b



10 Door Locks: a, variation 1 (Figure 9a with addition of cover plate); b, variation 2 (Figure 9b with addition of cover plate); c, variation 3 (Figure 8c with addition of cover plate). (NHSS RA-706 B)



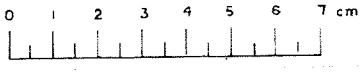
a



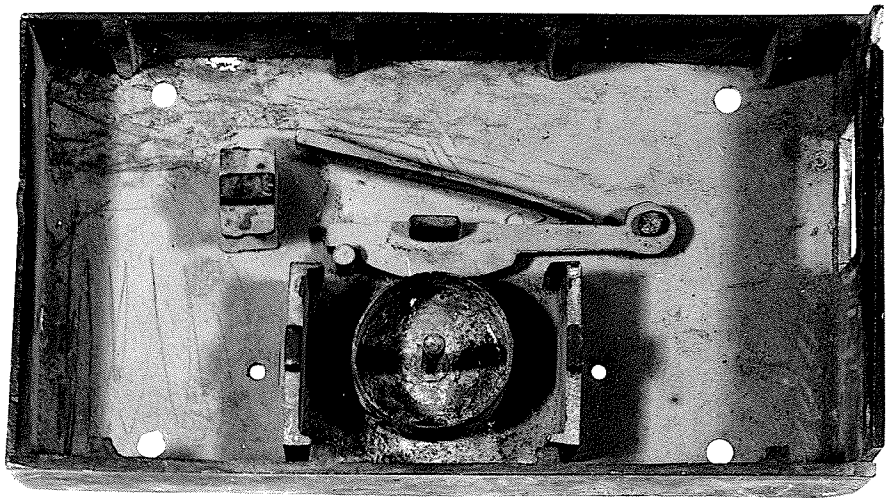
b



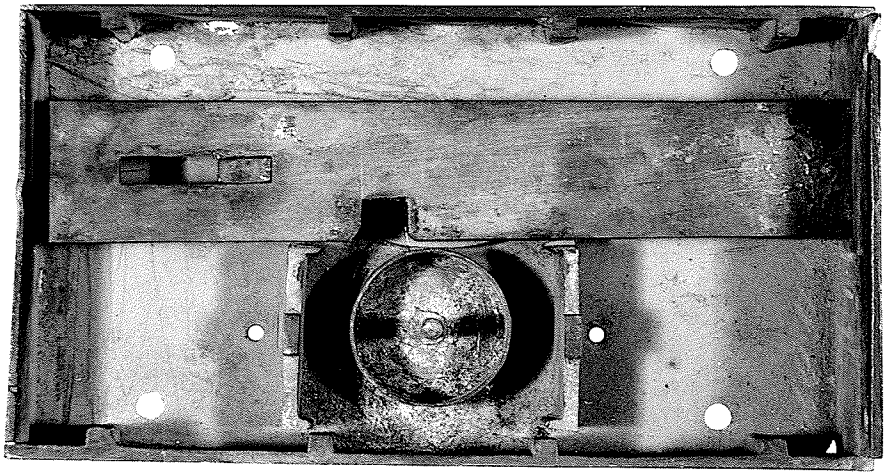
c



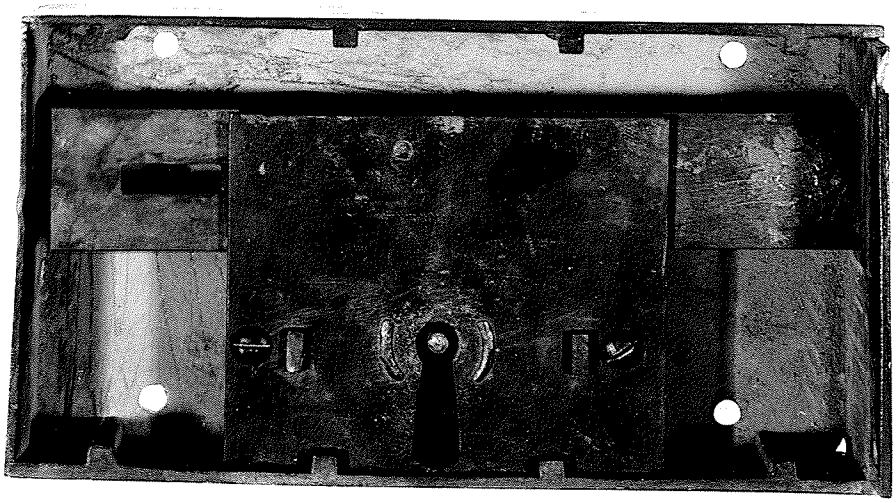
11 Door Locks; Variation 5 (9G3A5): a, complete housing with tumbler, tumbler spring, ward, and lock bolt guide; b, with addition of lock bolt; c, with addition of cover plate. (NHSS RA-887 B)



a

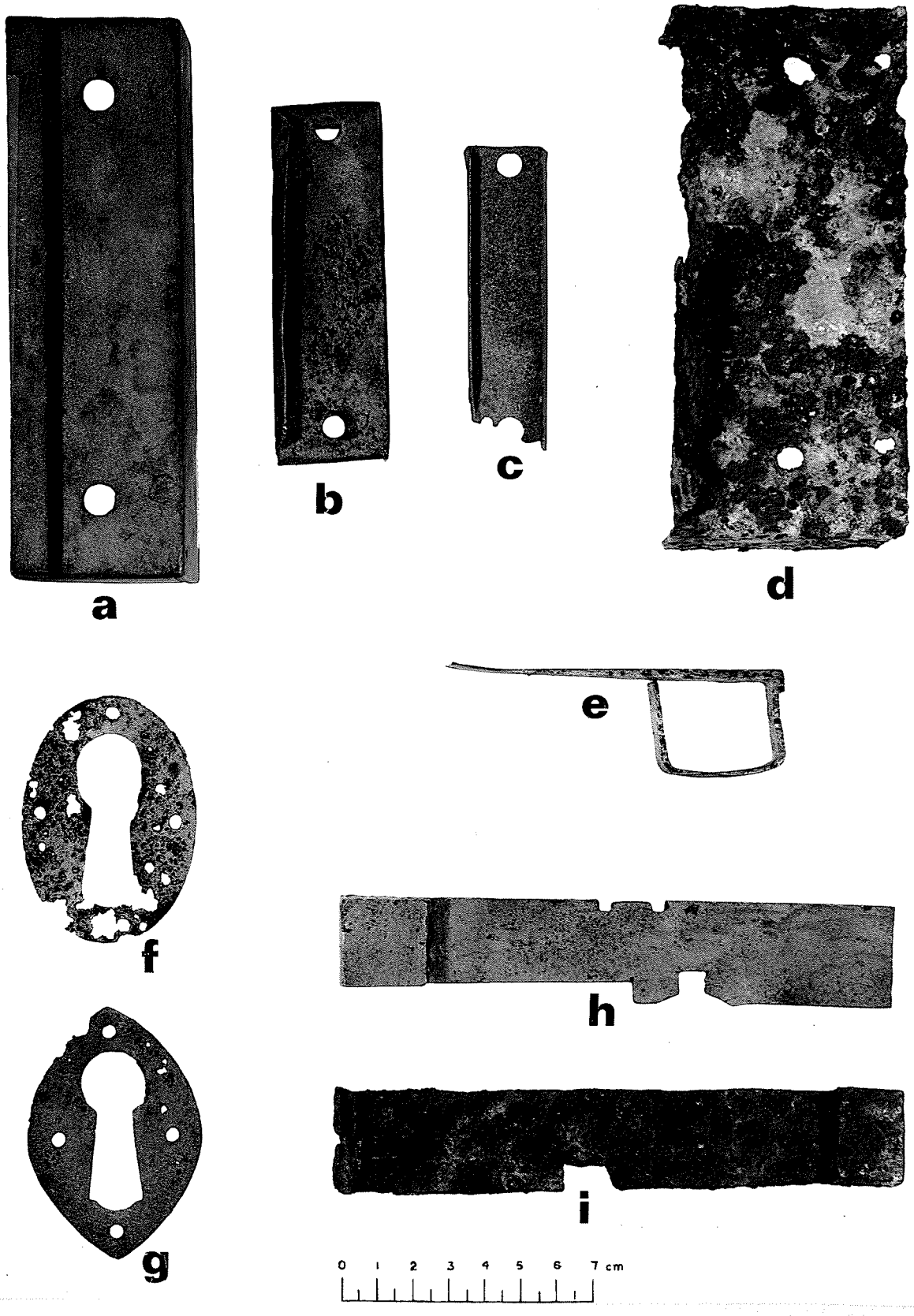


b



c

12 Door-Lock Keepers: a, variation 1 (9G4C8-118); b, variation 2 (9G4D3-131); c, variation 3 (9G6J2-61); d, variation 4 (9G17D1). Door-Lock Tumblers: e, variation 1 (9G4B3-234). Door-Lock-Key Escutcheons: f, variation 1 (9G4B3-233); g, variation 2 (9G4C3-75). Door-Lock Lock Bolts: h, variation 1 (9G4B3-220); i, variation 2 (9G4D7-161). (NHSS RA-741 B)


a
b
c
d
e
f
g
h
i
0 1 2 3 4 5 6 7 cm

13 Padlocks: a, variation 1 (9G8G3-6); b, variation 2 (9G1B32); c, variation 3 (9G4D3-16); d, variation 4 (9G9G1-26). Keys: e, variation 1 (9G8G16-46); f, variation 2 (9G44T1-13); g, variation 3 (9G4A12-250); h, variation 4 (9G32C1-64); i, variation 5 (9G9S7-4); j, variation 6 (9G6D2-106). (NHSS RA-751 B)

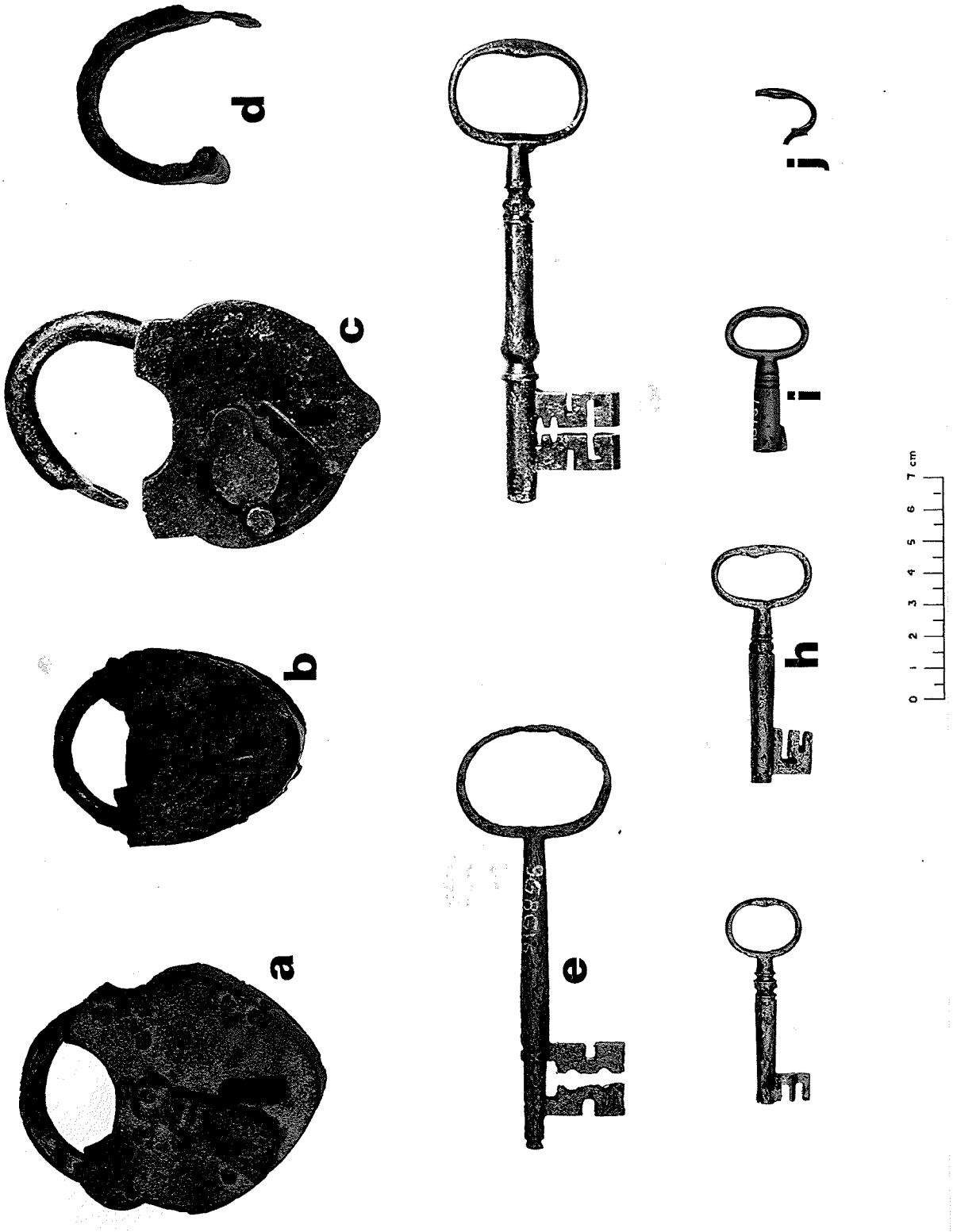

a
b
c
d
e
f
g
h
i
j
0 1 2 3 4 5 6 7 cm

Table 6	Door Lock Distribution - 9G																
Variation / Provenience	1	2	3	4	5	Ind											Total
9G3					1												1
9G4	2	2															4
9G5	3	1	1			3											8
9G6		1				2											3
9G9	2					1											3
9G11						1											1
9G12						1											1
9G13				1													1
9G15		3				3											6
9G22	1					4											5
9G23		1															1
9G26		1															1
9G28						1											1
9G31		1															1
9G39			1														1
9G51	1	1				1											3
9G54						1											1
Total	9	11	2	1	1	18											42

Table 7	Door-Lock Keeper Distribution - 9G																
Variation / Provenience	1	2	3	4													Total
9G4	1	1															2
9G6		1	1														2
9G17				1													1
Total	1	2	1	1													5

Table 8	Door-Lock-Key Escutcheon Distribution - 9G																
Variation / Provenience	1	2															Total
9G3	1																1
9G4	1	1															2
9G15	1																1
Total	3	1															4

Table 9	Door-Lock Lock Bolt Distribution - 9G																
Variation / Provenience	1	2															Total
9G4	1	1															2
9G7	1																1
9G11	2																2
9G23	1																1
9G26		1															1
Total	5	2															7

Table 10	Door-Lock Tumbler Distribution - 9G																
Variation / Provenience	1																Total
9G4	1																1
9G9	1																1
9G26	1																1
																	3
Total	3																

Table 11	Key Distribution - 9G																	
Variation / Provenience	1	2	3	4	5	6	Ind											Total
9G4		3	1				1											5
9G5							1											1
9G6			1			1	1											3
9G7			1		1													2
9G8	1																	1
9G9			1		1													2
9G15			2		2													4
9G21					2													2
9G32				1														1
9G39			1															1
9G44		1																1
9G51		1					1											2
Total	1	5	7	1	6	1	4											25

Table 12	Padlock Distribution - 9G																	
Variation / Provenience	1	2	3	4	Ind													Total
9G4			1															1
9G5					2													2
9G6					1													1
9G8	1																	1
9G9				1														1
9G15	1																	1
9G24					1													1
Total	2		1	1	4													8

Shutter Dogs

Description

A shutter dog is a restraining device attached to the outside of a wall, near a window, and intended to maintain a shutter in an open position. Although they can have a variety of forms, accomplishing their function in a variety of ways (Sonn 1928: vol. III), those in the collection consist of a bar attached perpendicularly to an anchor which would be driven into the wall. The bar, constituting the catch, has the anchor attached near its centre, in a way allowing the catch to pivot freely.

Apparently the majority of such devices were attached below the shutter. In use, the catch would be turned horizontally to allow the shutter to pass and then turned vertically to catch the lower edge of the shutter and hold it in place. It also appears likely that catches usually did not have the anchor attached exactly in their middle, resulting in one end being slightly heavier than the other. In this way, gravity would maintain the catch in a vertical position. Such shutter dogs would also not work well if attached elsewhere than at the lower edge of the shutter.

Shutter dogs appear to be almost entirely hand forged. The collection has no others nor does Sonn (1928: vol. III) illustrate any. They apparently persisted into the 19th century although hardware catalogues from the second half of the century no longer include them. On the other hand,

they appear in contexts dating to the 17th century (Sonn 1928: vol. III). The operation of restraining a shutter can also be achieved by a combination of gate hook and long catch eye, as is the case for some shutters in the reconstruction at Louisbourg, but no gate hook from the collection could be limited to such an application and no eyes which could have been used in such a situation were recognized.

Variations

Variation 1 (Figs. 14a; 15a)

Manufacture: wrought

Form:

Catch: having a rhombus shaped center with tapered circular shanks attached at two diagonally opposite corners; single hole in center for attachment to anchor; shanks curved in opposite directions, in the same plane as the centre, into a spiral of approximately $2\frac{1}{4}$ revolutions to produce an "S" curve; one spiral is slightly larger than the other and, consequently, heavier

Anchor: a tapered shank with the upper end squared and the edges bevelled and the remainder thinned and drawn out to one side to produce a single shoulder; chisel point; upper end constricted to pass through hole in centre of catch with

end riveted to hold catch in place but allowing it to pivot

Use: The slight difference in weight of the two spirals of the catch suggests attachment under the shutter with the catch maintained normally in a vertical position by this difference.

Variation 2 (Figs. 14b; 15b)

Manufacture: wrought

Form:

Catch: represented at present only by a fragment of the center which suggests a possible similarity with the catch of variation 1.

Anchor: a tapered square shank; edges bevelled at upper end; sharp point; upper end constricted to pass through hole in catch with end riveted to hold catch in place but allowing it to pivot

Use: Not known at present although the suggested similarity of form with variation 1 suggests a further similarity in use.

Variation 3 (Figs. 14c; 15c)

Manufacture: wrought

Form:

Catch: of a rectangular bar altered at one end into a tapered circular shank which is curved forward into a spiral of about one revolution; spiral in a plane perpendicular to plane of the

bar; other end thinned and rolled forward; single hole for attachment to anchor located to render spiral end heavier than the other

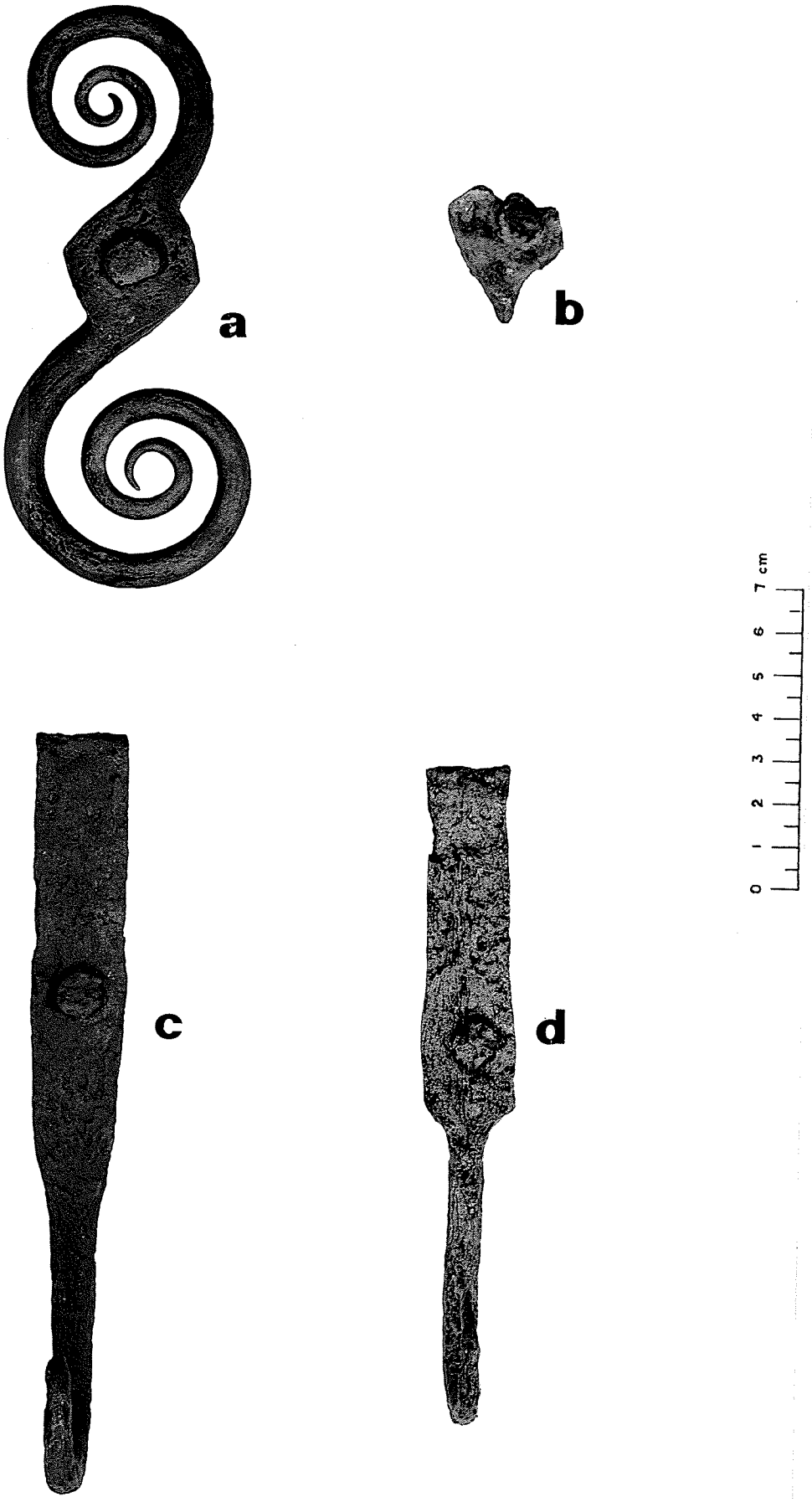
Anchor: a tapered square shank; sharp or chisel point; upper end constricted to pass through hole in catch with end riveted to hold catch in place but allowing it to pivot

Use: Difference in weight of the two ends of the catch suggests attachment under the shutter with the catch maintained normally in a vertical position by this difference.

Distribution

The majority appear in areas of period II although the relatively large quantity in 9G4 are largely responsible for creating this impression (Table 13). It is more likely that they were used at least in period I and II although possibly not on a large number of the buildings.

14 Shutter Dogs (plan view): a, variation 1 (9G4B3-320); b, variation 2 (9G15B4-38); c, variation 3 (9G4A18-109); d, variation 4 (9G4A18-110). (NHSS RA-752 B)


a
b
c
d
0 1 2 3 4 5 6 7 cm

15 Shutter Dogs (side view): a, variation 1 (9G4B3-320); b, variation 2 (9G15B4-38); c, variation 3 (9G4A18-109); d, variation 4 (9G4A18-110). (NHSS RA-696 B)

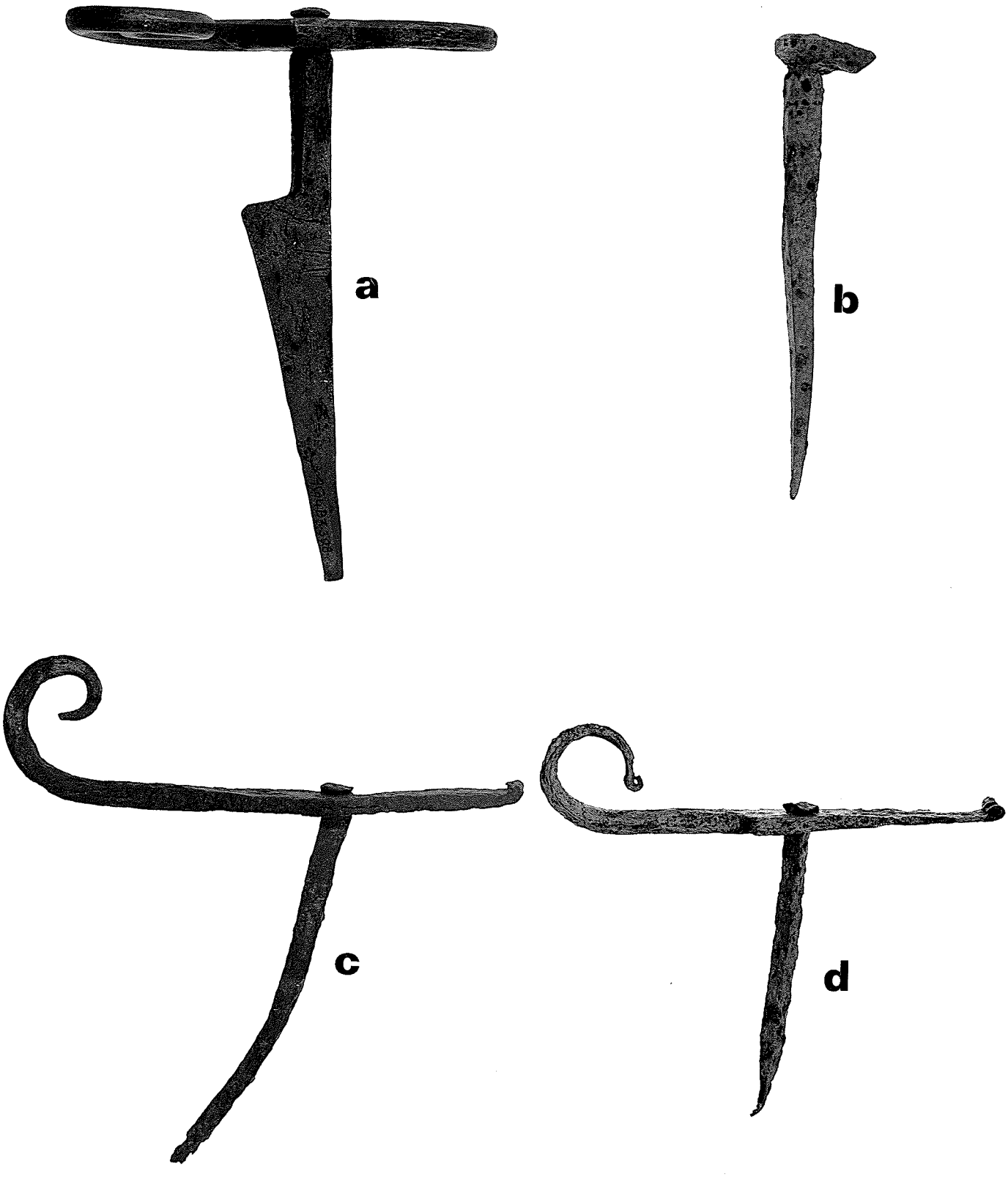

a
b
c
d
0 1 2 3 4 5 6 7 cm

Table 13	Shutter Dog Distribution - 9G																	
Variation / Provenience	1	2	3	4	Ind													Total
9G4	1		3	1	1													6
9G5					1													1
9G6					1													1
9G9					1													1
9G15		1			1													2
9G22					1													1
9G23					1													1
9G51	2																	2
Total	3	1	3	1	7													15

Sliding Bolts

Description

A sliding bolt is a closure device consisting of a bar attached near the edge of a door, window or shutter and sliding into a catch on the door frame. It is attached, and slides in, a set of loops which are either attached directly to the door or to a plate which is, in turn, attached to the door. The catch is another loop, also attached directly to the frame or to a plate. A sliding bolt can operate from a vertical or horizontal position although for a vertical mount there must be some means to prevent it from sliding by gravity at some undesirable time. With the presence of a back plate, such undesirable movement can be prevented by the addition of a spring acting between the plate and the bar. Other possibilities exist but are not represented in the collection. Operation can also be facilitated with a handle consisting, here, of an element at right angles to the main body of the bolt and derived either from a shaping of part of the bolt or the addition of another bar.

A sliding bolt affords moderate control over the opening with which it is associated. It can only be operated from the side on which it is mounted and, consequently, secures the opening from anyone on the other side. Otherwise, it is operable for anyone on the right side. It can be associated with a hasp, in which case

operation is further restricted by use of a padlock. This latter situation is not represented on any specimens in the collection. When a hasp is present it can also serve as a handle.

Manufacture is either by hand forging or machine. Wrought examples are known to exist to the middle of the 19th century, and possibly beyond, and styles similar to these although machine made persisted into the 20th century. All of the wrought bolts here have a square or rectangular bar which can only slide back and forth in its loops. Later machine manufacture appears to have brought with it an increased use of the circular bar which can also turn in its loops thus allowing for other methods of holding the bolt in position and eliminating the need for a spring. On a circular bolt, it can be turned to catch the handle in a notch, thereby holding the bolt in a certain position. The one possible machine made bolt was, however, apparently still provided with a spring.

Variations

Variation 1 (Figs. 16a; 17a)

Manufacture: wrought

Form: A rectangular bar, forming the bolt, mounted with staples on a back plate

Bolt: slides on narrow side; bent forward at right angles at the heel end and terminating with

a flat circular disc riveted into position; lower side is split and spread slightly for part of the distance to produce a spring; toe end bevelled on front; two projections on upper side to form stops, one between the staples and one in front; front stop larger

Back Plate: strap; with holes for fastening

Staples: two; squared; riveted to back plate

Use: Attached by fastenings through holes in back plate; presence of a spring on the bolt allows for use in a vertical position although this is not the only possibility; similar forms have been observed in use on shutters.

Variation 2 (Figs. 16b; 17b)

Manufacture: wrought

Form: A rectangular bar, forming the bolt, mounted with staples on a back plate

Bolt: slides on narrow side; bent forward at right angles at the heel end with the end of the bar spread to form a flat circular handle; toe end bevelled on front; one projection on upper surface to form a stop, situated between the first and second staple

Back Plate: strap; with holes for fastening; iron strap attached with one rivet in its center to form a spring

Staples: three; squared; riveted to back plate

Use: Attached by fastenings through holes in back plate; presence of a spring on the back plate allows for use in a vertical position although this is not the only possibility; similar forms have been observed in use on shutters.

Variation 3 (Figs. 16c; 17c)

Manufacture: wrought

Form: A rectangular bar, forming the bolt, mounted with staples on a back plate

Bolt: slides on narrow side; bent forward approximately at right angles at the heel end and terminating with a flat circular disc riveted into position; toe end bevelled on front; one projection on upper surface to form a stop, between the staples

Back Plate: strap; with holes for fastening; iron strap attached with one rivet in its center to form a spring

Staples: two; squared; riveted to back plate

Use: Attached by fastenings through holes in back plate; presence of a spring on the back plate allows for use in a vertical position although this is not the only possibility; similar forms have been observed in use on shutters.

Variation 4 (Figs. 16d; 17d)

Manufacture: wrought

Form: A rectangular bar, forming the bolt, mounted with staples on a back plate

Bolt: slides on wide side; handle consists of a circular bar with one end riveted, at right angles, to heel end and rounded circular knob attached to other end; lower side of bar is split and spread slightly for part of its distance to produce a spring; toe end blunt; one projection on either side to form a single stop, between the staples

Back Plate: strap; with holes for fastening

Staples: two; squared; riveted to back plate

Use: Attached by fastenings through holes in back plate; presence of a spring on the bolt allows for use in a vertical position although this is not the only possibility.

Variation 5 (Figs. 16e; 17e)

Manufacture: wrought

Form: A rectangular bar, forming the bolt, mounted with staples on a back plate

Bolt: slides on wide side; constructed of a bar which has been doubled under at the toe end with the two layers possibly forge welded together for part of the length and slightly spread for the

remainder to produce a spring; bent at right angles at heel end, then spread and rolled to produce a scroll handle; one projection on either side of the lower layer of metal to produce a single stop between the staples

Back Plate: strap; with holes for fastening

Staples: two; squared; riveted to back plate

Use: Attached by fastening through holes in back plate; presence of a spring on the bolt allows for use in a vertical position although this is not the only possibility.

Variation 6 (Fig. 16f)

Manufacture: machine made

Form: Represented at present only by a back plate with one staple

Bolt: form of staple suggests a circular bar

Back Plate: strap; corners possibly scalloped at one end, other end not present; presence of two rivets, one near either side, plus fragment of plate suggests presence of a spring riveted across back plate, perpendicular to longitudinal axis of bolt; with holes for fastening

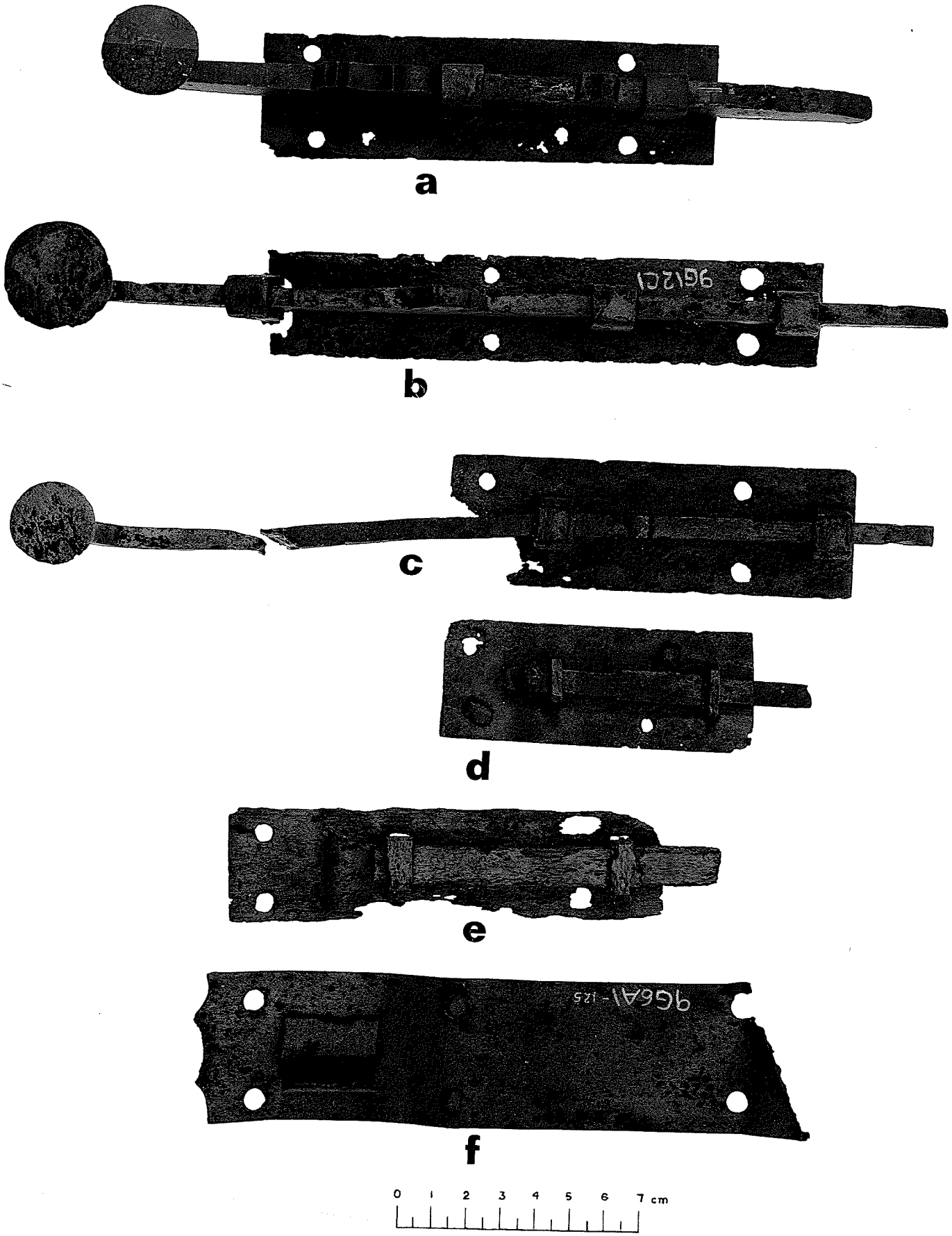
Staples: only one at present, although more would be present on a complete specimen; round; riveted to back plate

Use: Attached by fastening through holes in back plate; possible presence of a spring would allow for use in a vertical position although this is not the only possibility.

Distribution

These are found in areas of the first three periods although apparently more often during period II (Table 14). The one variation considered to be machine made occurs in period I where it may represent an early example of machine manufacture or an intrusion.

16 Sliding Bolts (plan view): a, variation 1 (9G3E2-49); b, variation 2 (9G12C1-102); c, variation 3 (9G15G3); d, variation 4 (9G4A15-100); e, variation 5 (9G41B1-10); f, variation 6 (9G6A1-125). (NHSS RA-698 B)


a
b
c
d
e
f
0 1 2 3 4 5 6 7 cm

17 Sliding Bolts (side view): a, variation 1 (9G3E2-49); b, variation 2 (9G12C1-102); c, variation 3 (9G15G3); d, variation 4 (9G4A15-100); e, variation 5 (9G41B1-10). (NHSS RA-699 B)

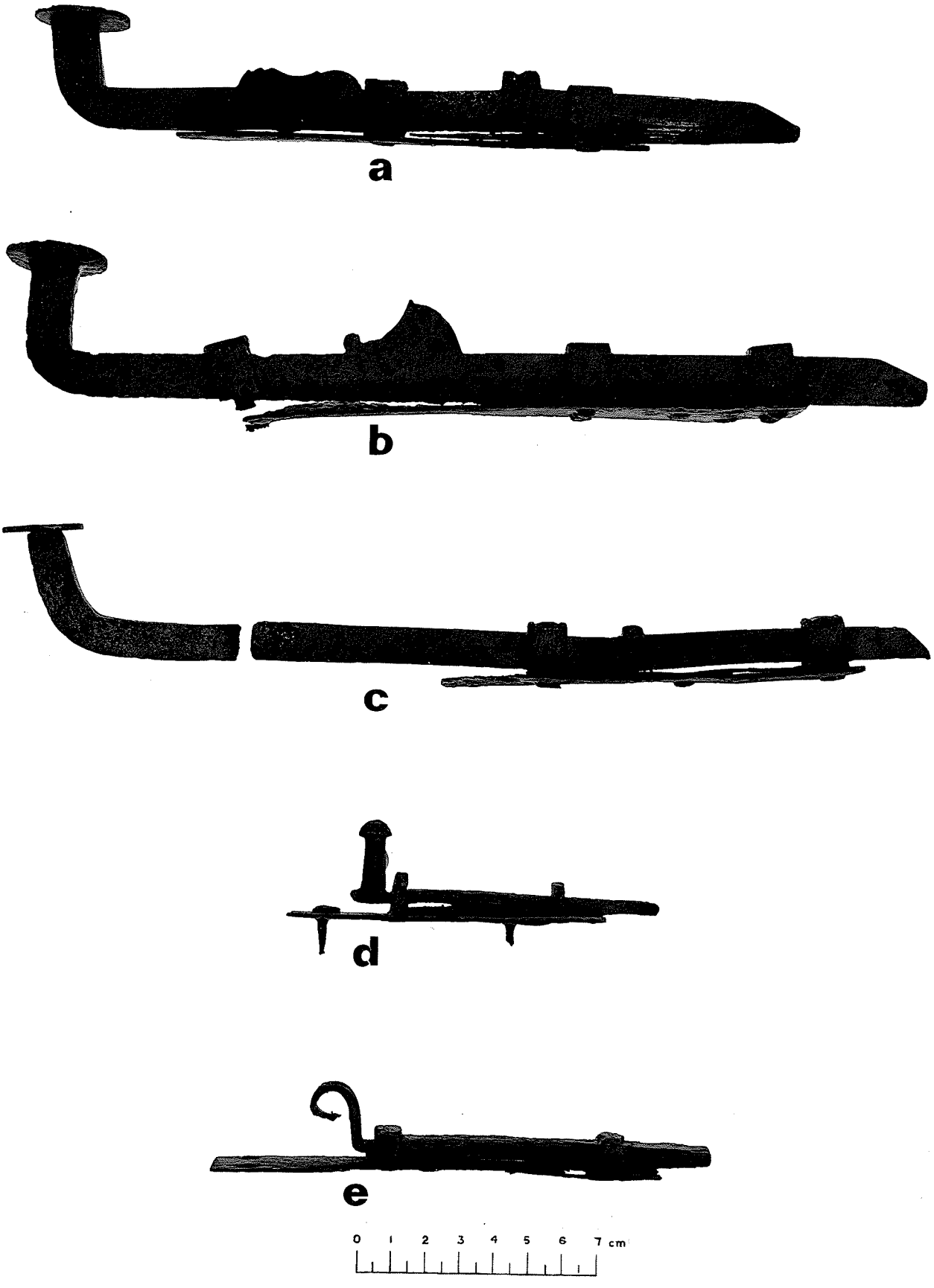

a
b
c
d
e
0 1 2 3 4 5 6 7 cm

Table 14	Sliding Bolt Distribution - 9G																	
Variation / Provenience	1	2	3	4	5	6	Ind											Total
9G3	1																	1
9G4	1			1														2
9G6						1												1
9G9							1											1
9G12		2																2
9G15		1	1				2											4
9G21	1																	1
9G25							1											1
9G41					1													1
Total	3	3	1	1	1	1	4											14

Staples

Description

A staple is a loop like device produced by bending a bar, in the middle, into a shape approximating that of a U, with its two arms approximately parallel and of equal length. In general, they are either round, in which case they are like a regular U, or square, with the two arms straight and meeting a straight central section at, or approaching, a right angle. Shape can also vary according to the nature of bar used.

In use the ends are driven into part of a building or attached to a plate which is in turn attached to a building. Staples can be used as guides for latch bars, for the attachment of gate hooks and to provide a loop for a hasp to pass over. In most cases it has not been possible to consider a range of uses or even to limit their use to being a part of a building.

All specimens from the collection are either wrought or machine made although it is not possible to suggest when a transition from one to the other took place. Cast specimens are listed under latch bar guides for thumb latches as this is the only form they take at the site.

Variations

Variation 1 (Fig. 18a)

Manufacture: wrought

Form: A rectangular/square bar bent into a round shape with the arms riveted to a plate

Arms: edges bevelled; slightly tapered

Plate: rectangular; two holes for attachment of arms

Use: The lack of holes for attachment in the plate suggests attachment in a mortared wall; use in association with hasp is possible but neither definite nor exclusive.

Variation 2 (Fig. 18b)

Manufacture: wrought

Form: A circular bar bent into a round shape with the ends probably riveted to a plate (plate not represented at present)

Arms: taper slightly and become rectangular/square toward the ends; both ends spread, suggestive of riveting for attachment to a plate

Use: Attachment to a plate would suggest a fastening similar to variation 1; the pattern of wear on 9G4C8-111 suggests use in conjunction with a chain although this is neither definite nor exclusive.

Variation 3 (Fig. 18c)

Manufacture: wrought

Form: Similar to variation 2 except that it is bent into a square shape rather than a round one; attachment to a plate is also probable but the plate is not represented at present

Use: Attachment to a plate would suggest a fastening similar to variations 1 and 2 although the squared shape also suggests the possibility of a different range than for these two.

Variation 4 (Fig. 18d)

Manufacture: wrought

Form: Rectangular/square bar bent into a round shape

Shank: edges bevelled, approaching a circular cross section

Arms: tapered; sharp points

Use: Association with a gate hook or hasp are two possibilities.

Variation 5 (Fig. 18e)

Manufacture: wrought

Form: Similar to variation 4 except that arms end with chisel points

Use: Similar to variation 4.

Variation 6 (Fig. 18f)

Manufacture: wrought

Form: A rectangular bar bent into a round shape

Arms: tapered; chisel point

Use: Association with a hasp is one possibility.

Variation 7 (Fig. 18g)

Manufacture: wrought

Form: Consisting of a rectangular bar bent into a round shape

Shank: widened and thinned; shoulder at transition to arms

Arms: tapered; chisel point

Use: The widened central section suggests the possibility of a more specialized application or limited range; one possibility could be an association with a sliding bolt although this should be considered as neither definite or exclusive.

Variation 8 (Fig. 18h)

Manufacture: wrought

Form: A rectangular bar bent into a square shape

Arms: tapered on two sides; chisel point

Use: Association with a sliding bolt or door lock are possibilities although this is neither definite nor exclusive.

Variation 9 (Fig. 18i)

Manufacture: wrought

Form: A rectangular/square bar bent into a square shape

Arms: edges bevelled; tapered; points not represented at present

Use: Association with a sliding bolt or door lock are possibilities although this is neither definite nor exclusive.

Variation 10 (Fig. 18j)

Manufacture: wrought

Form: A rectangular bar bent into a square shape

Arms: shoulder at upper end; tapered; chisel or sharp point

Use: Associations with a sliding bolt, door latch, or lock are possibilities although they are neither definite nor exclusive.

Variation 11 (Fig. 18k)

Manufacture: wrought

Form: A rectangular bar bent into a square shape

Arms: reduction in width, beginning at bend, resulting in a form of shoulder; tapered; point not represented at present

Use: Association with a sliding bolt, thumb latch or door lock are possibilities but is neither definite nor exclusive.

Distribution

These appear during all construction periods although the relatively larger quantity in 9G4 may create the illusion that they are concentrated in period II (Table 15). Variations 1 and 2 are virtually restricted to 9G4 but the significance of this situation cannot be suggested.

18 Staples: a, variation 1 (9G4C3-73); b, variation 2 (9G4C3-32); c, variation 3 (9G4B6-86); d, variation 4 (9G3C3-49); e, variation 5 (9G3C3-50); f, variation 6 (9G22G2-30); g, variation 7 (9G15Z1-350); h, variation 8 (9G11M1-64); i, variation 9 (9G32C1-62); j, variation 10 (9G15Z1-349); k, variation 11 (9G14J1-84). (NHSS RA-697 B)

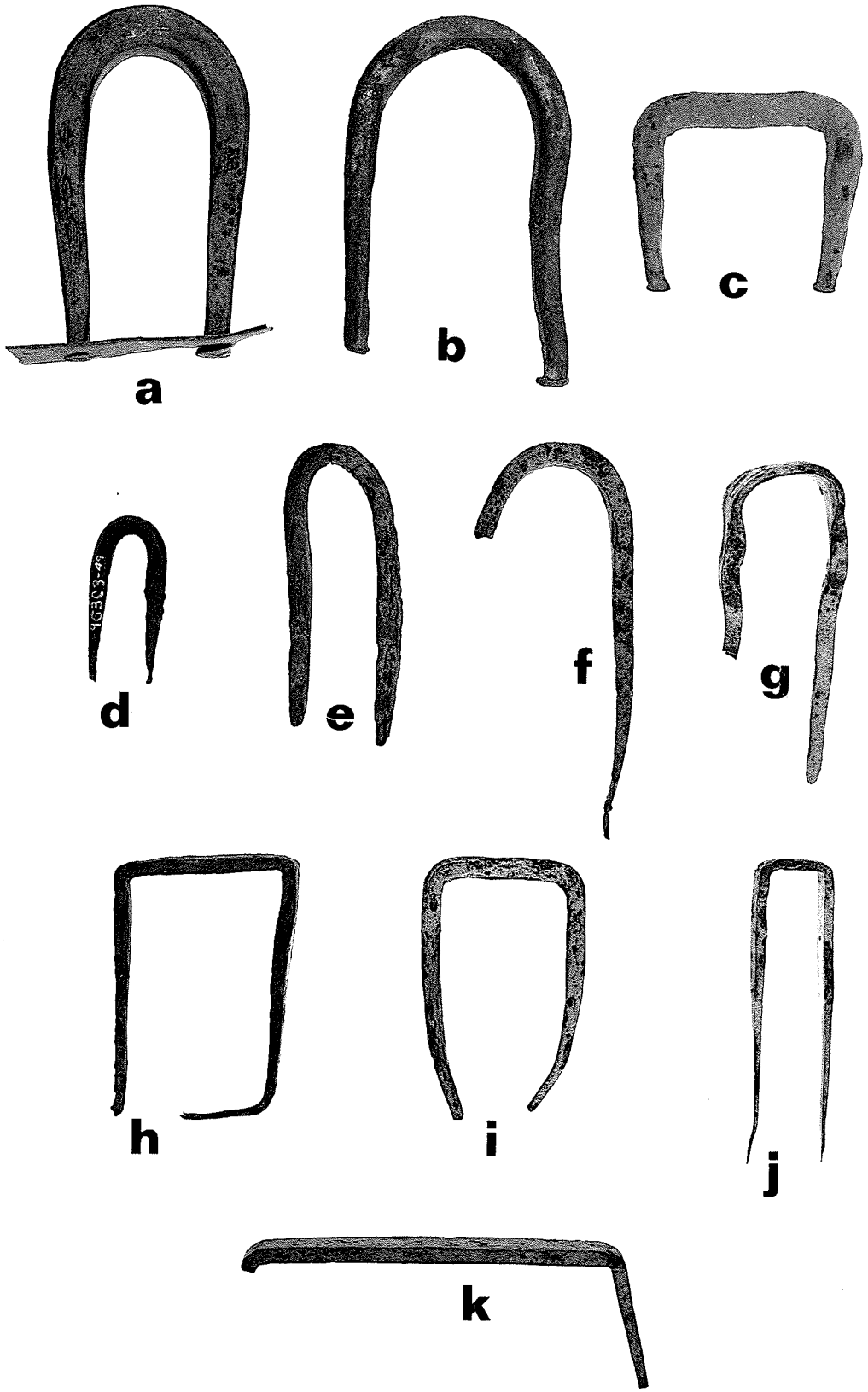

a
b
c
d
e
f
g
h
i
j
k
0 1 2 3 4 5 6 7 cm

Table 15	Staple Distribution - 9G																
Variation / Provenience	1	2	3	4	5	6	7	8	9	10	11	Ind					Total
9G2					1												1
9G3				3	2			1				1					7
9G4	4	3	1	1	1					5	1	2					18
9G5					1			2				2					5
9G6					1						1	2					4
9G7								3		1							4
9G8												1					1
9G9										1							1
9G11				2				1				1					4
9G14											1						1
9G15							1			1	1						3
9G18												1					1
9G21				1	1												2
9G22						1		1		1							3
9G23								1									1
9G24	1				1												2
9G25								1				3					4
9G26					2							1					3
9G29												1					1
9G32									1	1							2
9G39					2		1										3
9G51				1						1							2
Total	5	3	1	8	12	1	2	11	1	11	4	15					74

Thumb Latches

Description

A latch is a closure device serving to hold a door, or similar part of a building, in a closed position and consisting of at least a bar or bolt which can engage with a catch attached to the door frame. Associated with each latch there must be some means to lift the bar or slide the bolt and a method of attachment for the bar or bolt which will allow the necessary amount of movement. Latches can be of much simpler design than locks since they do not require the same kind of housing for mounting and operation.

In contrast with a lock, a latch serves only to hold a door closed, it does not secure it, and can normally be operated by anyone from either side of the door. Latches with a more restricted operation, such as being accessible from only one side, do exist but not in the collection.

A latch can have one of two basic methods of operation, either having a bar attached to the door so that it can pivot in a vertical plane and consequently fall into a catch or having a bolt slide in a horizontal plane into or behind a catch. Latches under consideration here are all of the former type, except for the one included within variation 1 of door lock, and are given the designation of thumb latch.

A thumb latch derives its name from the role of the thumb in providing the necessary pressure to lift the latch bar from the catch in opening the door. It consists of

several basic parts: the handle; the latch bar; the lift bar; the catch; the guide; and the latch-bar lock.

The thumb-latch handle is a rounded piece of metal attached to a door and serving as a hand grasp in opening the door. It is usually associated with the lift bar which passes through some part of it and is attached or connected in some way.

The latch bar (Fig. 19b) is a bar with a hole near one end through which is passed a fastening for attachment to a door. The bar is attached on the opposite surface of the door to the handle and near one edge of the door with a short part projecting beyond the edge of the door. This projecting end engages with the catch to hold the door. The single fastening allows it to pivot in a vertical plane through a short arc, the extent of which is determined by the guide.

The lift bar (Fig. 19a) is a bar passing through a part of the handle and the door and under the latch bar. It is meant to pivot at or near the handle so that a downward thrust at the handle side of the door will lift the other end, consequently lifting the latch bar. The end on the handle side is usually flattened and spread into a plate known as the thumb press. The other end may be curved downward to provide another handle although in many cases it remains unaltered.

The catch (Fig. 19c) is a hook, or similar device, attached to the door frame to provide a notch into which

the end of the latch bar can fall to hold the door. To open the door the latch bar must first be lifted out of this notch, by raising one end of the lift bar.

The guide (Fig. 19d) is an additional bar attached to the latch bar side of the door, perpendicular to the latch bar and straddling it. The ends of such a guide determine the extent of movement possible for the latch bar. In some cases the guide is a specific form intended for only that purpose, in which case it can be identified. However, in many other instances, it is no more than a square staple driven into the door at the appropriate location and cannot be identified conclusively because of the other possible applications it may have.

Occasionally there will be a second pivoted bar, designated a latch-bar lock (Fig. 19e), attached above the latch bar. In a vertical, or near vertical, position its free end rests on the upper edge of the latch bar, thus preventing it from being lifted. Such a device is not mentioned either by Mercer (1924) or Sonn although Sonn (1928: Vol. I, Pl. 54, Fig. 1; Pl. 55, Fig. 1) illustrates some more elaborate forms of latches, having a partial housing, which do have such a feature.

In use, the various parts of a thumb latch are attached to both surfaces of a door. The front latch group constitutes the handle and the thumb press end of the lift bar, the back latch group constitutes the latch bar, catch, guide,

and lift end of lift bar (Sonn 1928: Vol. 1, 23-4). An observer on the back latch side would have the door open toward him.

Occasionally it is possible to determine the nature of a specific application through an observation of wear marks on the various parts, primarily the latch bar. In an ideal situation, the latch bar will be worn at the end where it slid over the catch, thereby establishing the lower edge of the bar and, consequently, indicating its location on a door and the manner in which the door opened. This interpretation can be further reinforced by the presence of wear marks on the lower edge left by the lift bar. The guide will also leave traces of wear but usually it is not possible to determine from these which is upper or lower, they can be expected on both edges. Wear marks on the lift bar, where it made contact with the latch bar, can provide suggestions for the possible thickness of the door.

Thumb latches have been in existence for some time predating the establishment of the site. Originally these were all hand forged, although some may have been hand forged in a factory, and were eventually superseded by cast iron variations, first invented and produced in 1840 on an American patent of William Blake (Mercer 1924: 185; Sonn 1928: Vol. 1, 28). Earlier cast forms are known to have existed, possibly by the beginning of the 19th century (Mercer 1924: 185; Stevens 1969; Streeter 1972) but their

distribution or popularity at such an early date are not known. No cast specimens are present in the collection.

Hand forged thumb latches have been characterized as having one of the only two general forms; either the handle has one or both ends spread and flattened into a plate, referred to as a cusp, with holes for fastening, or the handle is attached to a separate plate which, in turn, has holes for fastening. The former is referred to as the "Suffolk" type and the latter as the "Norfolk" type (Mercer 1924: 182-85; Sonn 1928: Vol. 1, 25-8).

Some dates can be attached to these differences of form although the sources for such information are neither recent nor derived from data for eastern Canada. It may, therefore, be considered as having application for this collection, with some reservation. Mercer (1923) indicates that Suffolk latches appear throughout the 18th century but Norfolk latches only appear at the end of the 18th century. The earlier lift bars of a Suffolk latch are considered to have been straight with few curved ones to be expected prior to 1800 (Mercer 1923: 140-1; 1924: 184). Early Suffolk latch also had the lift bar passing through the upper cusp and only later did it move to a swivel section located between the upper end of the handle and the upper cusp. The transition to a swivel section appears to have been around the middle of the 18th century (Mercer 1923: 140; 1924: Fig. 12). The Norfolk is seen as first coming to the

U.S.A. approximately at 1800 (Mercer 1924: 185; Sonn 1928: Vol. 1, 27) and eventually replacing the Suffolk latch around 1820 (Mercer 1924: 185). The Norfolk latch is further characterized as having a straight lift until about 1800-10 and having the latch bar, catch, and guide attached to a plate, rather than directly to the door, after 1825 (Sonn 1928: Vol. 1, 28). The lift bar can be either with or without a swivel hole (Mercer 1924: 185). It is further stated that the majority of Norfolk latches in the U.S.A. were factory produced (Sonn 1928: Vol. 1, 27; Mercer 1924: 185) although possibly still by hand forging.

The nature of a thumb latch, consisting of at least four separate parts, dictates that in an archaeological context they will usually be found as separate units. Their occurrence in the same building or related contexts may, however, allow for suggestions on which of them could have been part of the same latch.

Variations

Thumb-Latch Handles

Variation 1 (Figs. 20a; 21a)

Manufacture: wrought

Form: "Suffolk"; a cusp at either end and the lift bar passing through a pivot section between upper end of handle and upper cusp; Mercer (1923) considers this form to be distinctive because of its fixed form of

cusp and limited size range and he further suggests that the majority were probably imported from England

Handle: plano convex in cross section; sides taper from middle to either cusp; three centred arch

Cusp: bean shaped; three holes in each; holes punched

Lift Bar: straight; tapered from pivot point; thumb press flat and bean shaped

Variation 2 (Figs. 20b; 21b)

Manufacture: wrought

Form: "Norfolk"; a handle with either end riveted to a back plate and a lift bar inserted through a pivot at upper end of back plate, above handle

Handle: circular bar; square or flat arch; ends have been enlarged for attachment to plate; series of rings and grooves in middle

Back Plate: flat; rectangular; scalloped corners (chisel cut); four holes for attachment, punched - one at either end and one at either side, in the middle

Lift Bar: end opposite to thumb press is curved downward; tapered from pivot; thumb press not represented at present although it was possibly flat

Thumb-Latch Lift-Bars

Variation 1 (Figs. 20c; 21c)

Manufacture: wrought

Form: A rectangular bar with one end shaped into a thumb press

Shank: slightly tapered on two sides, away from thumb press; hole near thumb press for pivot pin; straight

Thumb Press: flat; circular

Use: The specific nature of thumb latch for which this was intended cannot be indicated; there is a possibility of them occurring with both variations 1 and 2 of thumb-latch handle.

Variation 2 (Figs. 20d; 21d)

Manufacture: wrought

Form: Identical with variation 1 except for a bean shaped thumb press

Use: The specific nature of thumb latch for which this is intended cannot be indicated; there is a possibility of them occurring with both variations 1 and 2 of thumb latch handle

Variation 3 (Figs. 20e; 21e)

Manufacture: wrought

Form: A rectangular bar with one end spread and thinned into a thumb press

Shank: slightly tapered on two sides, away from thumb press; straight; lower edge has been split for a distance, beginning near thumb press and extending toward other end, and spread to provide a restraining device

Thumb Press: flat; circular

Use: The split in the shank indicates that it passed through a plate, possibly on either a "Norfolk" or "Suffolk" form, and was held in place by the spring butting on the back of the plate.

Thumb-Latch Bars

Variation 1 (Fig. 22f)

Manufacture: wrought

Form: A rectangular bar with one end spread and thinned for a pivot

Shank: tapered, beginning approximately one third of length from pivot

Pivot: bean shaped; single hole in centre; transition from shank may be angular

Variation 2 (Fig. 22g)

Manufacture: wrought

Form: A rectangular bar with one end spread for a pivot and presumably attached to a pivot plate

Shank: tapered to pivot beginning approximately one third of length from pivot; taper may result in a thickening of the bar

Pivot: circular; single hole in center; transition from shank may be angular

Pivot Plate: not represented at present although its presence is suggested by a rivet in the pivot of one of the specimens

Use: Attached by fastenings through pivot plate.

Variation 3 (Fig. 22h)

Manufacture: wrought

Form: A rectangular bar with one end spread for a pivot; attached to a pivot plate; and provided with a handle

Shank: tapered toward pivot, beginning approximately one third of length from pivot; hole near center for handle

Pivot: circular; single hole in centre for attachment to pivot plate with a rivet; transition from shank may be angular

Handle: circular bar with one end spread into a rounded circular knob and other end inserted through hole in shank and riveted

Use: Attached by fastenings through holes in pivot plate.

Thumb-Latch-Bar Locks

Variation 1 (Fig. 22e)

Manufacture: wrought

Form: A rectangular bar with one end thinned and spread for a pivot

Shank: turns on narrow side; non tapered

Pivot: circular; angular transition from shank; single hole in centre

Use: Attached by fastening through hole in pivot.

Thumb-Latch-Bar Guides

Variation 1 (Fig. 22i)

Manufacture: wrought

Form: A rectangular bar with either end bent at right angles twice to produce a central section which is slightly off the plane of the end sections; single hole in each end; both ends have been cut off with a chisel

Use: Attached by fastenings through the hole in each end; its identification implies an association with a thumb latch bar, with the guide attached at right angles to the bar and serving to restrict its movement; other applications may be possible but are unknown at present.

Variation 2 (Fig. 22j)

Manufacture: cast

Form: One piece construction consisting of a flat rectangular back plate with a square staple like part attached; hole in either end of back plate; holes are countersunk on both surfaces

Use: Attached by fastenings through the hole in either end; thumb latch bar would fit between staple and back plate and be restricted in its movement by the limits of the staple.

Thumb-Latch Catches

Variation 1 (Fig. 22a)

Manufacture: wrought

Form: Figure 4; driven

Hook: formed by spreading or folding the end of the bar and shaping into a triangle

Shank: rectangular/square; tapered; chisel point

Variation 2 (Fig. 22b)

Manufacture: wrought

Form: Identical with variation 1 except for a sharp point on the shank

Variation 3 (Fig. 22c)

Manufacture: wrought

Form: Figure 4; driven; reinforced

Shank: square; tapered; sharp point

Hook: manufacture similar to that for variation 1

Reinforcing: square bar; tapered; sharp point; parallel to shank; driven

Use: Form of reinforcing bar may indicate use with a latch or lock of some form.

Variation 4 (Fig. 22d)

Manufacture: wrought

Form: Figure 4; riveted to back plate for a surface attachment; reinforced

Reinforcing: rectangular bar; butting on back plate

Back Plate: flat; rectangular; fastening hole at either end

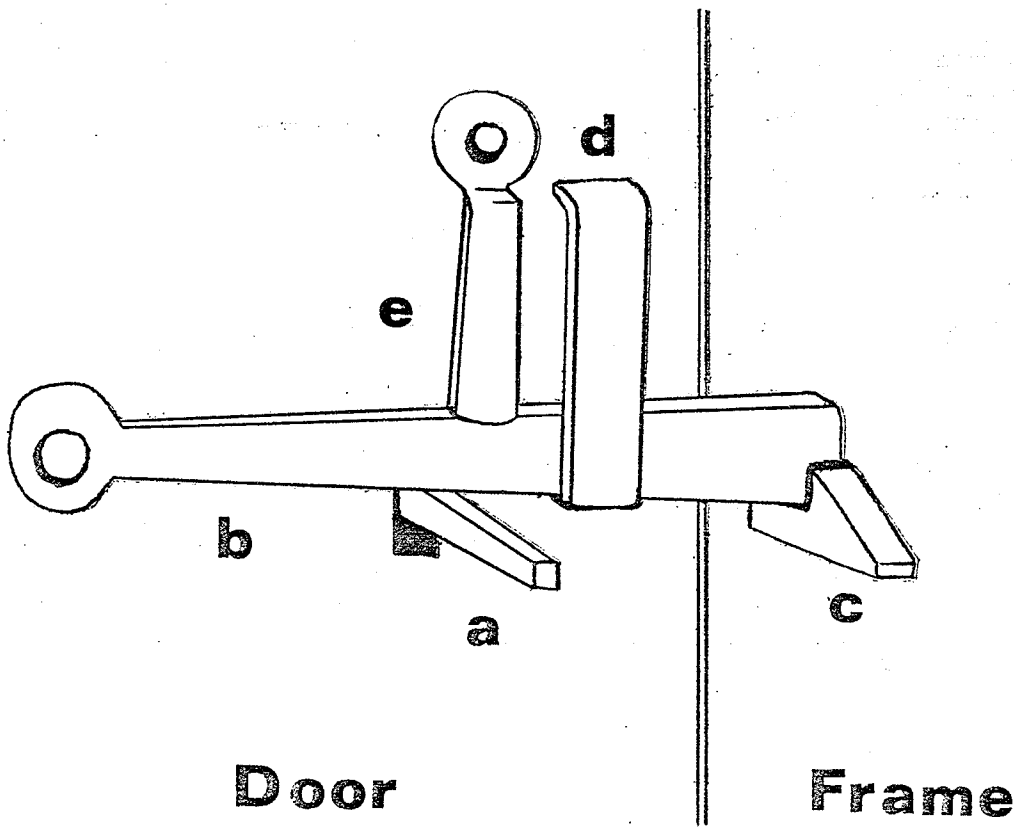
Distribution

There appears to be a quantitative concentration in areas of period I (Tables 16-21) although it is unlikely that their use declined during the later periods. Although the quantity of handle variation 2 is small, they do not occur until period II. The separate lift bars, which could in part be either for handle variation 1 or 2, occur only in period I and, consequently, allow for the possibility of handle variation 2 during this period.

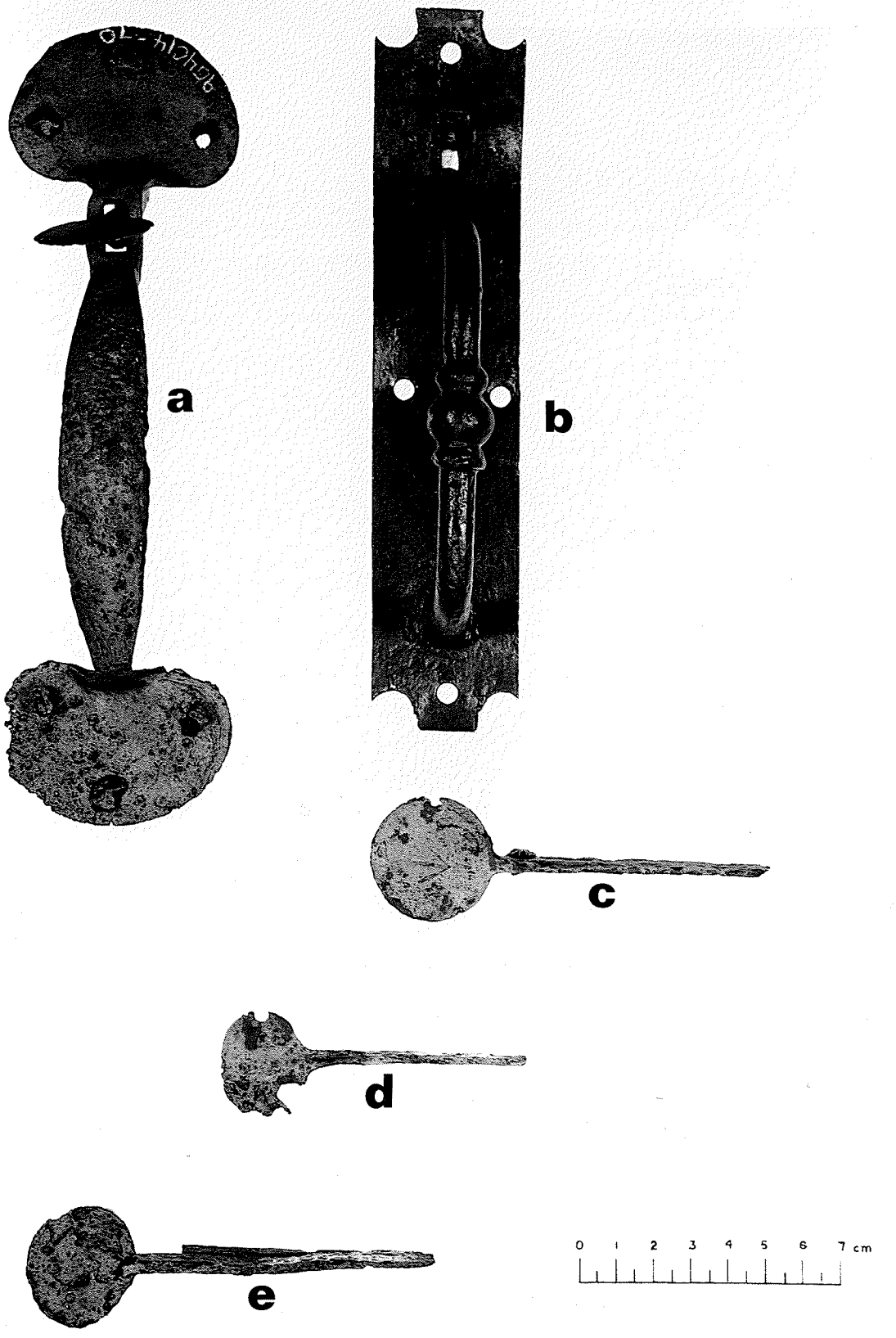
Pivot plates on latch bars from areas of period I could indicate the appearance of this feature prior to the date of 1825 suggested by Mercer although it may also reflect reconstruction. The latch bar lock is of particular interest since it appears to be an infrequent item, illustrated only in a discussion of British hardware but absent in discussions of American hardware. Guides appear in the first three periods, wrought during periods I and III and cast during

periods I and II. The presence of cast specimens in areas considered to represent period I may be of some significance although, again, it could also be reconstruction or alteration.

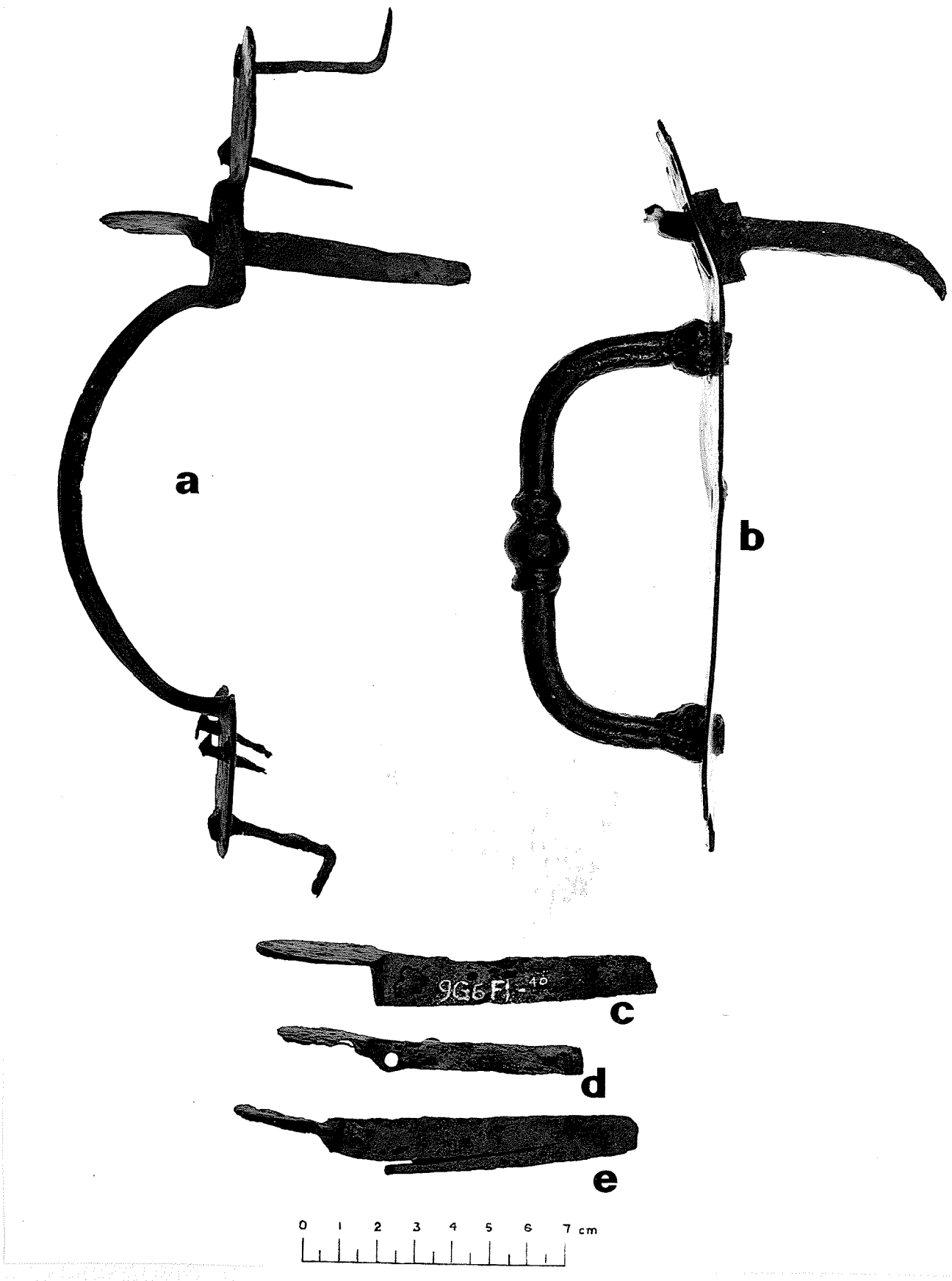
19 Parts of a thumb latch; back latch group: a, lift bar; b, latch bar; c, catch; d, guide; e, lock bar.


d
e
b
a
c
Door
Frame

20 Thumb-Latch Handles (plan view): a, variation 1 (9G4C14-70); b, variation 2 (9G44R1-1). Thumb-Latch Lift Bars (plan view): c, variation 1 (9G6F1-40); d, variation 2 (9G6F2-64); e, variation 3 f, variation 3 (9G11M1-65). (NHSS RA-753 B)


a
b
c
d
e
0 1 2 3 4 5 6 7 cm

21 Thumb-Latch Handles (side view): a, variation 1 (9G4C14-70); b, variation 2 (9G44R1-1). Thumb-Latch Lift Bars (side view): c, variation 1 (9G6F1-40); d, variation 2 (9G6F2-64); e, variation 3 (9G11M1-65). (NHSS RA-700 B)


a
b
9G6 Fl. - 40
c
d
e
0 1 2 3 4 5 6 7 cm

22 Thumb-Latch Catches: a, variation 1 (9G4C7-157); b, variation 2 (9G37B1-61); c, variation 3 (9G4G3-1); d, variation 4 (9G14J1). Thumb-Latch-Bar Locks: e, variation 1 (9G4B19-109). Thumb-Latch Bar: f, variation 1 (9G4C13-29); g, variation 2 (9G14J1-85); h, variation 3 (9G32J2-295). Thumb-Latch Bar Guides: i, variation 1 (9G6A1-127); j, variation 2 (9G24A1-39). (NHSS RA-695 B)

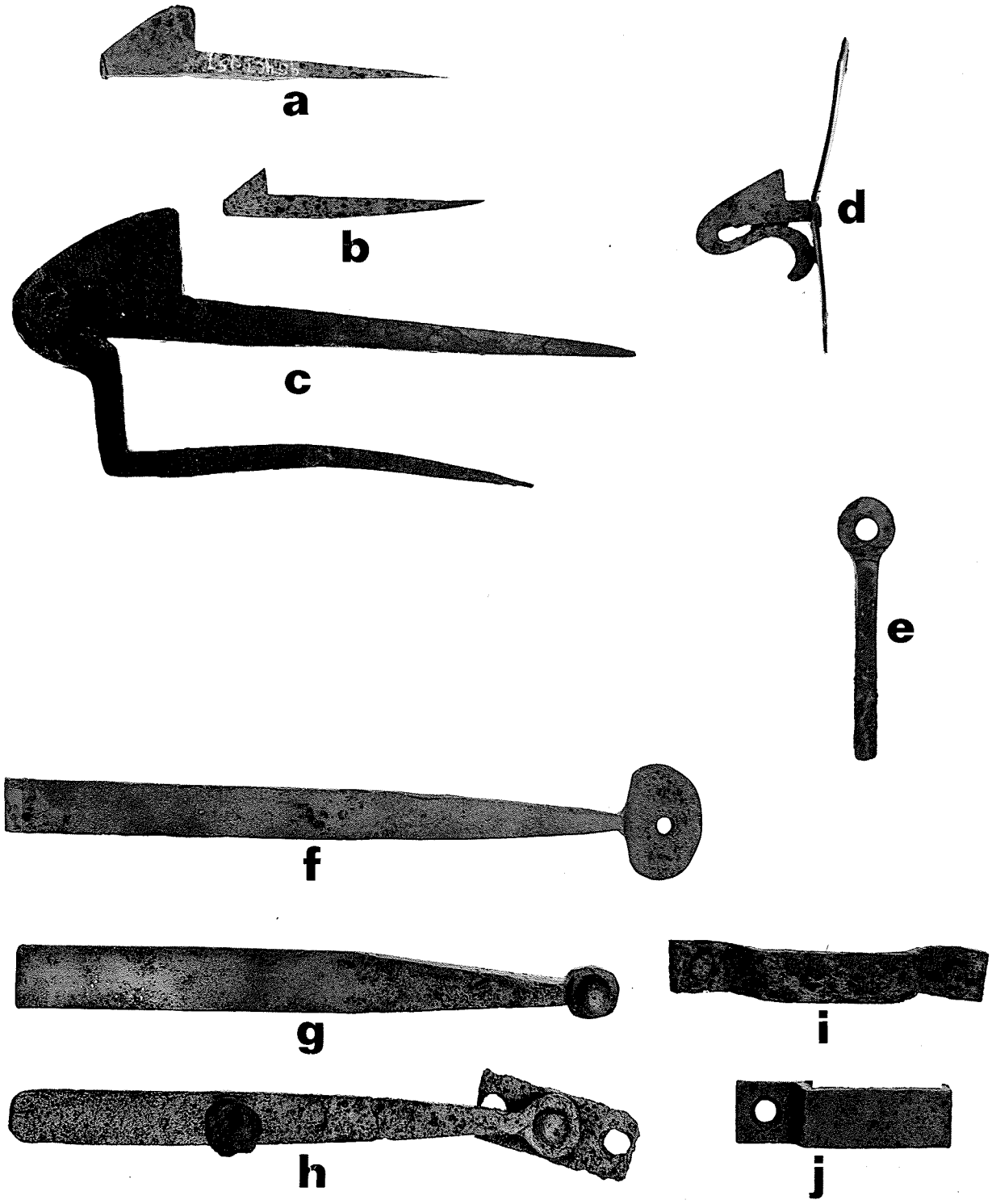

a
b
c
d
e
f
g
h
i
j
0 1 2 3 4 5 6 7 cm

Table 16	Thumb-Latch Handle Distribution - 9G																			
Variation / Provenience	1	2																		Total
9G4	2																			2
9G15		1																		1
9G21	1																			1
9G44		1																		1
Total	3	2																		5

Table 17	Thumb-Latch Lift Bar Distribution - 9G																			
Variation / Provenience	1	2	3																	Total
9G6	1	1																		2
9G11			1																	1
Total	1	1	1																	3

Table 18	Thumb-Latch Bar Distribution - 9G																			
Variation / Provenience	1	2	3	Ind																Total
9G4	5																			5
9G5		1																		1
9G9				1																1
9G12	1																			1
9G14		1																		1
9G15				1																1
9G26	2																			2
9G31			1																	1
9G32			1	1																2
Total	8	2	2	3																15

Table 19	Thumb-Latch-Bar Lock Distribution - 9G	
Variation / Provenience	1	Total
9G4	1	1
Total	1	11

Table 20	Thumb-Latch-Bar Guide Distribution - 9G		
Variation / Provenience	1	2	Total
9G3		1	1
9G4		1	1
9G6	1	1	2
9G24		1	1
9G25	1		1
Total	2	4	6

Table 21	Thumb-Latch Catch Distribution - 9G					
Variation / Provenience	1	2	3	4	Ind	Total
9G4	2		2	1	1	6
9G5					1	1
9G6	1	2				3
9G9		1				1
9G12					1	1
9G15					1	1
9G19	1					1
9G25					1	1
9G29					1	1
9G37		1				1
Total	4	4	2	1	6	17

Fastenings

A fastening is any device which is used to hold items together rigidly and with some degree of permanence. Ultimately, fastenings are the items which hold the majority of a building together. They are generally slender rigid pieces of material and are used by being passed through or into the material being joined.

Bolts and Nuts

Description

A bolt is a fastening consisting of a relatively slender, rigid piece of metal with one end enlarged and shaped into a head and the other provided with a thread, or helical ridge, for all or part of its distance. In use, it passes through prepared holes in the material being joined and usually engages with a metal block, known as the nut, having a threaded perforation. Normally a complete joint consists of a bolt with a nut.

They can have a variety of applications both within and beyond building hardware and, consequently, items have been included on the basis of a possible use in building hardware and recovery from areas of construction and buildings. In the absence of more detailed information on context, however, it is not possible to limit them to such an application. It is likely that some of the variations were used for pieces of ordnance such as cannon carriages.

The bolt has probably been known at least since Roman times (Mercer 1924: 253; Kellerman and Treue 1962: 134 ff.). However, after the 6th century in Europe knowledge of the screw and bolt was lost and did not reappear until the 15th and 16th centuries. After their reappearance and into the 18th century, production was small and they were usually produced by the exceptional rather than the average craftsman (Kellerman and Treue 1962: 155, 173). Hewett (1972), however, has also argued that the decline of carpentry standards in the early 17th century in England led to an increased use of bolts for the assembly of the major structural parts of a building. The Industrial Revolution during the 18th century also precipitated a greater demand for threaded fasteners. These were initially produced by hand, resulting in a variety of quality and form with no attempt to standardize production. It was, however, not until late in the 18th century that major improvements in the manufacturing process were initiated. Until that time threads had usually been cut with dies, containing small cutting blades, into which the blank for the bolt was turned by hand. The process was relatively slow with the quality of the results occasionally questionable. The situation apparently prevailed until improvements in the metal lathe were made, beginning in 1797 with the work of Henry Maudslay in England (Kellerman and Treue 1962: 177 ff.).

The detailed nature of the threads of any specific bolt or group has not been taken into consideration for the definition of variations. However, for future studies such information should possibly be considered as a source for details of manufacture and distribution. Kellerman and Treue (1962: 123) have stated that until approximately 1800 each manufacturer of threaded fasteners was concerned with the development of his own thread design in order to retain his customers by making the customer dependent on him and the first attempts to overcome this confusion were made by Henry Maudslay. The attempts of others followed in the hopes of establishing standards which would become acceptable for a major part of industry. Discussion raged for many years, even into the present century, and is still reflected in the different standards of Europe and North America (Kellerman and Treue 1962: 283 ff.). Consequently, different threads for various 18th and 19th century sites may reflect different manufacturers or trade patterns.

Although bolts have a variety of applications in building, Mercer indicates that they were not used frequently because of their expense. He sees the proliferation of American manufacture as coming only in the 1840s to meet demands from the wagon industry with manufacture by blacksmiths continuing until late in the 19th century (Mercer 1960: 251 ff.).

Variations

Bolts

Variation 1 (Fig. 23a)

Manufacture: wrought

Form:

Head: slightly rounded, occasionally approximating a flattened rosehead; irregularly circular

Shank: rectangular/square; non taper

Variation 2 (Fig. 23b)

Manufacture: machine made

Form:

Head: flat, square, bevelled corners

Shank: circular; non tapered

Point: sharp; unthreaded

Use: Has also been referred to as a lag bolt or lag screw and is used to attach something to wood by being turned into the wood without use of a nut; should possibly be considered with the screws rather than the bolts.

Variation 3 (Fig. 23c)

Manufacture: wrought

Form:

Head: flat; rectangular/square

Shank: rectangular/square; non taper

Point: squared; tapered; blunt; unthreaded

Variation 4 (Fig. 23d)

Manufacture: wrought

Form: Similar to variation 3 except for a slight difference in the head and absence of a definite point

Head: slightly rounded

Variation 5 (Fig. 23e)

Manufacture: wrought

Form:

Head: slightly rounded; circular

Shank: circular, possibly altered from rectangular/square stock

Variation 6 (Fig. 23f)

Manufacture: possibly wrought

Form: Similar to variation 5 except that uniformity suggests the possibility of machine manufacture

Head: round; circular

Variation 7 (Fig. 23g)

Manufacture: wrought

Form:

Head: flat; circular; relatively large

Shank: rectangular/square, bevelled edges beginning just below head; rounded for thread

Use: The relatively large head suggests a limited use or range of uses, although no specific applications can be suggested.

Variation 8 (Fig. 23h)

Manufacture: wrought

Form:

Head: flat; square

Shank: non taper

Use: Bolts of this nature are referred to as machine bolts in catalogues, although this designation can also be applied to other variations in form and does not infer any limitations in use.

Variation 9 (Fig. 23i)

Manufacture: wrought

Form:

Head: flat; circular; slotted

Shank: rectangular/square with edges bevelled, approaching a circular cross section; non taper

Variation 10 (Fig. 23j)

Manufacture: possibly machine made

Form:

Head: round; circular; slotted

Shank: circular; non taper

Use: Bolts of this nature are referred to as stove bolts in catalogues although no specific application can be inferred from this.

Variation 11 (Fig. 23k)

Manufacture: machine made

Form:

Head: round; circular

Shank: circular; non taper; thickens into a square shoulder under the head

Use: Bolts of this nature are referred to as carriage bolts in catalogues although this designation can also be applied to other variations of form and does not allow an inference of specific applications.

Variation 12 (Fig. 23m)

Manufacture: machine made

Form:

Head: flat; hexagonal

Shank: circular; non taper

Use: As for variation 8, the designation of machine bolt has been used for this bolt in catalogues although no specific application can be inferred from this.

Variation 13 (Fig. 24a)

Manufacture: machine made

Form: Similar to variation 11 except for absence of shoulder

Head: round; circular

Shank: circular; non taper

Variation 14 (Fig. 24b)

Manufacture: machine made

Form:

Head: flat; circular; countersunk

Shank: circular; non taper

Variation 15 (Fig. 24c)

Manufacture: machine made

Form:

Shank: slight taper toward non threaded end; taper ends at a constriction near end; end is bevelled and spread slightly but not sufficient to project beyond thickest part of shank and provide a head

Use: Form suggests a more limited application, or range, although no specific applications can be suggested.

Variation 16 (Fig. 24d)

Manufacture: wrought

Form:

Head: flat; circular; countersunk

Shank: rectangular/square; non taper up to threaded section at which point it tapers on two sides; thread apparently cut on a squared shank resulting in it having two curved sections separated by the flat surfaces of the taper

Variation 17 (Fig. 24e)

Manufacture: wrought

Form:

Head: a right angle section with one end forge welded to end of shank with other end extending

away from the shank and parallel to its long axis; unattached end has a hole in it

Shank: rectangular; non taper; end rounded for thread

Use: Form of the head suggests a limited application, or range, although no specific applications can be suggested.

Variation 18 (Fig. 24f)

Manufacture: wrought

Form:

Head: a section of squared bar which has been wrapped around end of shank and forge welded into place; slightly rounded; circular

Shank: irregularly circular although it is not possible to determine whether this is altered from an original rectangular/square; tapered

Variation 19 (Fig. 24g)

Manufacture: wrought

Form:

Head: not represented

Shank: plano-convex becoming circular for the thread; non thread end suggests a bend although this could be the result of deformation at which time the remainder broke off

Use: There is possibility of a limited application, or range, although the absence of a head makes it

impossible to have any degree of certainty; no specific applications can be suggested.

Variation 20 (Fig. 24h)

Manufacture: machine made

Form:

Head: flat; circular; bevelled edge; could be characterized as a truncated cone

Shank: circular; non taper; thickened into a square shoulder under the head

Use: As with variation 11, this form has been designated as a carriage bolt in catalogues; it is similar to variation 11 except for a different head and a relatively longer shoulder. These two variations could share many of their applications although it is not possible to suggest specific ones.

Variation 21 (Fig. 24i)

Manufacture: machine made

Form:

Head: round; circular

Shank: circular; non taper; thickens into an oval shoulder under the head

Use: No specific applications can be suggested although the oval shoulder may suggest situations different from those for the square shoulder of variation 11 and 20.

Variation 22 (Figs. 24j, k)

Manufacture: wrought

Form:

Head: flat; square; relatively long and only slightly larger than the shank with a flat circular washer set against its lower end; head is sufficiently large to retain the washer, preventing it from slipping over the end of the shank

Shank: circular; non taper; thread has truncated crests between the cuts, in contrast to the sharp crests of other threads; sharp point beyond termination of thread

Use: The head and different thread suggest a limited application, or range, although no specific suggestions can be made.

Variation 23 (Fig. 24m)

Manufacture: wrought

Form:

Head: flat; circular; countersunk

Shank: circular; non taper

Use: It is known that this is one form of bolt used for the assembly of the cast iron mill wheel on the canal although this need not be its only application.

Nuts

Variation 1 (Fig. 25j)

Manufacture: wrought

Form: Flat, rectangular/square; hole apparently punched

Variation 2 (Fig. 25k)

Manufacture: machine made

Form: flat; hexagonal

Variation 3 (Fig. 25m)

Manufacture: wrought

Form: Consisting of a rectangular bar with a hole in the middle with the ends thinned, rounded, tapered and curved upward and inward to create an involute form. The term "wing nut" has been applied to such forms although many different forms can be included in that category

Variation 4

Manufacture: machine made

Form: flat; square

Distribution

It is evident that both bolts and nuts are primarily associated with areas of buildings and, to a lesser extent, with areas of construction (Tables 22, 23). From a total of 86 bolts, 66 are from buildings and a further five from other areas of construction. An association between bolts and nuts is also obvious; of 47 nuts, 41 were found in operations which also have bolts. The predominance in

building areas can reflect several differing situations; it may indicate that these items are indeed building hardware or they are associated with activities within the buildings. However, there does not appear to be an association with a specific function of a building.

The distribution of specific variations does not provide any further hint for identification of use. However, the absence of machine-made variations from areas which have been considered as part of period I suggests this type of manufacture to be a phenomena beginning only in the 19th century. Only one example of bolt variation 23 was present in the collection considered, although many were noted in the material from the canal including specific associations with fragments of a mill wheel. Since this one was designated as being from a general context (9G51- consisting of items whose specific provenience has been lost) it is possible that it was, in fact, also originally from the mill wheel.

23 Bolts: a, variation 1 (9G32J2-272); b, variation 2 (9G4B1-36); c, variation 3 (9G7A2-209); d, variation 4 (9G4D4-214); e, variation 5 (9G5A1-154); f, variation 6 (9G6E2-124); g, variation 7 (9G9K1-13); h, variation 8 (9G5B1-130); i, variation 9 (9G9B1-97); j, variation 10 (9G9M1-27); k, variation 11 (9G22J1-14); m, variation 12 (9G14B1-38). (NHSS RA-702 B)


a
b
c
d
e
f
g
h
i
j
k
m
0 1 2 3 4 5 6 7 cm

24 Bolts: a, variation 13 (9G14J1-62); b, variation 14 (9G14J1-67); c, variation 15 (9G15A1-131); d, variation 16 (9G15F3-206); e, variation 17 (9G15F3-211); f, variation 18 (9G15J3-251); g, variation 19 (9G26A2-145); h, variation 20 (9G39A1-59); i, variation 21 (9G15A2-155); j, variation 22 (9G5B1-131); k, variation 22 (9G4C3-36); m, variation 23 (9G51A2-164). (NHSS RA-701 B)

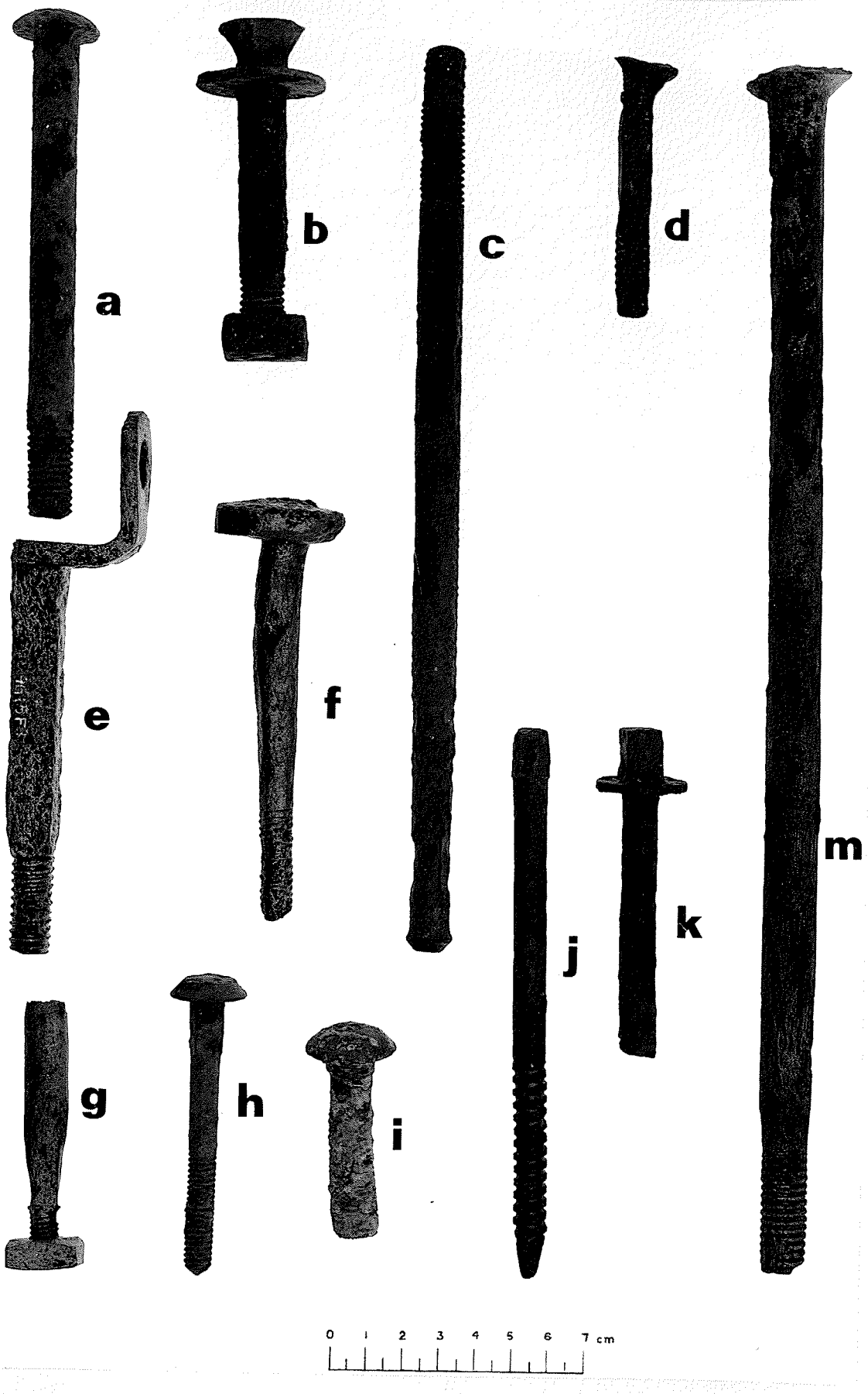

a
b
c
d
e
f
g
h
i
j
k
m
0 1 2 3 4 5 6 7 cm

Table 22	Bolt Distribution - 9G																											
Variation / Provehience	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Ind				Total
9G4	2	1	1	1																		2						7
9G5			3		1			1										1				1		1				8
9G6	1		3			1	1																	1				7
9G7			1					1																3				5
9G8			1																					1				2
9G9							1		1	2														2				6
9G10											3																	3
9G12			1																					1				2
9G14		2						1		1	4	1	1	1										1				12
9G15													1		1	1	1	1						3				8
9G18			1																									1
9G21		1	1					1																				3
9G22											1																	1
9G25	1		1					1		1		1																5
9G26			1	1															1					1				4
9G32	1																											1
9G38																				1								1
9G39								1												1				1				3
9G51			2					2													1		1	1				7
Total	5	4	16	2	1	1	2	8	1	4	8	2	2	1	1	1	1	2	1	2	1	3	1	16				86

25 Washers: a, variation 1 (9G8C6-25); b, variation 2 (9G14J1-86); c, variation 3 (9G13F1-66); d, variation 4 (9G39A1-58); e, variation 5 (9G51A1-162); f, variation 6 (9G6F1-38); g, variation 7 (9G3A4-64). Rivets: h, variation 1 (9G3C4-31); i, variation 2 (9G6A1-121). Screw Nails: j, variation 1 (9G14J1-75). Nuts: k, variation 1 (9G4B3-224); m, variation 2 (9G14J1-68); n, variation 3 (9G26C1-41). (NHSS RA-742 B)

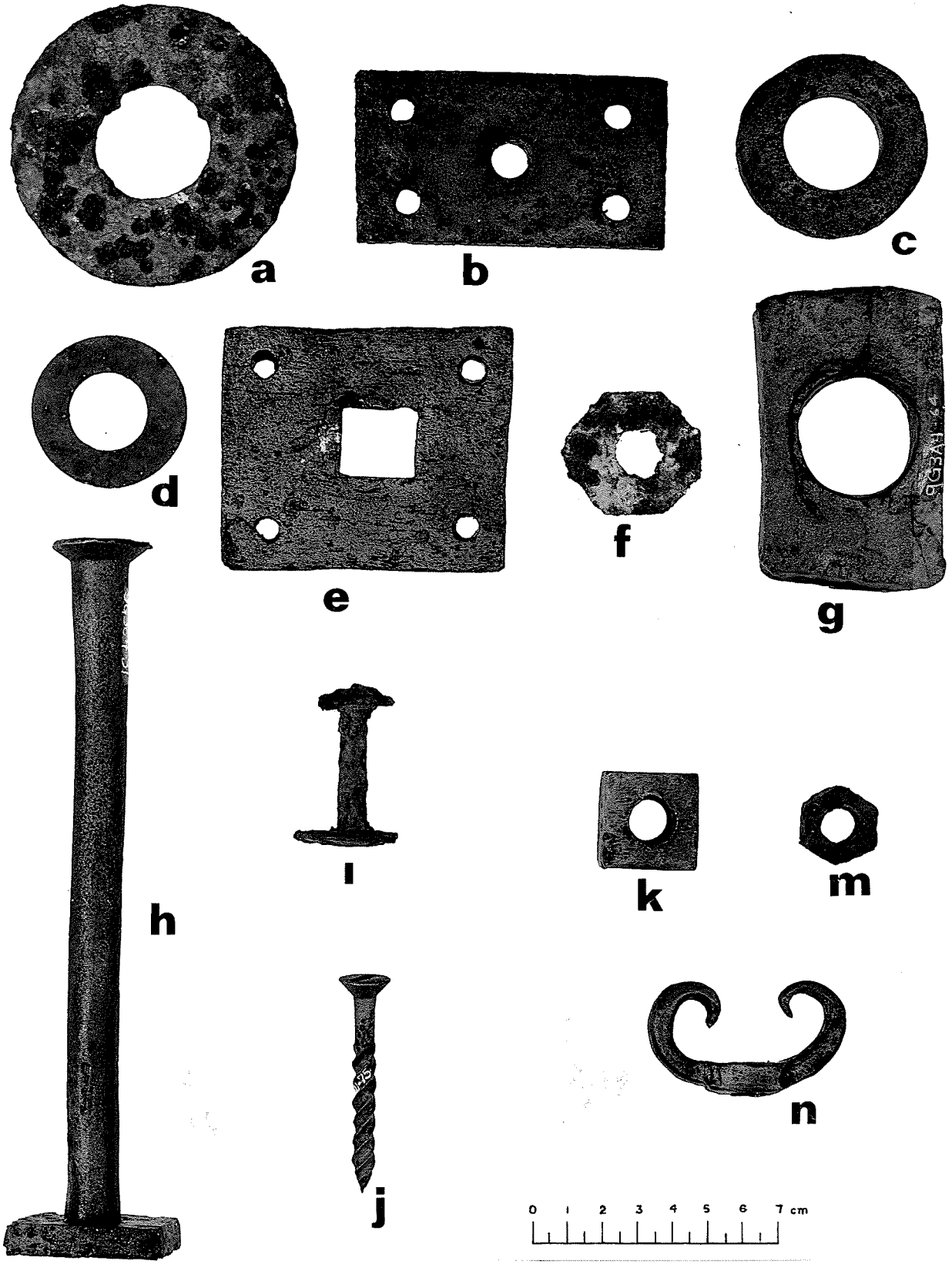

a
b
c
d
e
f
g
h
i
k
m
j
n
0 1 2 3 4 5 6 7 cm

Table 23	Nut Distribution - 9G																
Variation / Provenience	1	2	3	4													Total
9G4	5																5
9G5	3																3
9G6	2																2
9G7	5																5
9G9				1													1
9G10	3																3
9G11	1																1
9G12	3																3
9G13	1																1
9G14	2	1															3
9G15	2																2
9G18	1																1
9G21	1																1
9G22	1																1
9G24	1																1
9G25	1																1
9G26	4		1														5
9G31	1																1
9G37	1																1
9G39	3																3
9G45	1																1
9G51	3																3
Total	45	1	1	1													48

Washers

Description

A washer is a perforated plate generally used in association with a fastening and intended to increase the surface area, of the material being fastened, upon which the fastening acts, thereby distributing pressure from the fastening and possibly preventing the fastening from being drawn into the material. In other words, it serves to protect the material. They can find application in a variety of situations both within a building and elsewhere. Since there is no way of differentiating between such situations, the majority from the site have been included here.

Variations

Variation 1 (Fig. 25a)

Manufacture: wrought

Form: Flat; circular

Variation 2 (Fig. 25b)

Manufacture: wrought

Form: A rectangular plate with a central hole and a hole at each corner; all holes are circular and appear to be punched

Use: Although it is not possible to state with any degree of assurance, this form could also have been used as a catch for some form of latch or door bolt.

Variation 3 (Fig. 25c)

Manufacture: wrought

Form: Flat; circular; constructed of a length of rectangular bar bent into the required shape with the ends lapped and forge welded

Variation 4 (Fig. 25d)

Manufacture: machine made

Form: Flat; circular

Variation 5 (Fig. 25e)

Manufacture: wrought

Form: A rectangular plate with a larger central hole and a hole at each corner; corner holes are circular and countersunk; center hole is square

Use: As was the case for variation 2, this item could possibly have served as a catch for a latch or door bolt.

Variation 6 (Fig. 25f)

Manufacture: wrought

Form: Flat; irregularly octagonal, possibly a hurried attempt at duplicating a circular form

Variation 7 (Fig. 25g)

Manufacture: wrought

Form: Flat; rectangular; central circular hole; hole punched

Use: Usually found in association with timber anchor variation 2 although this need not be its only application.

Distribution

Generally they appear in areas which have also produced bolts, and occasionally they may even be attached to a bolt (Table 24). All but one of variation 7 are still attached to a variation 2 timber anchor. Although variations 2 and 5 may have a function distinct from the remainder their distribution does not provide the necessary clues for its identification.

Table 24	Washer Distribution - 9G																
Variation / Provenience	1	2	3	4	5	6	7	Ind									Total
9G3			3				4										7
9G4								2									2
9G6						1											1
9G8	1																1
9G9	2			1													3
9G10	1																1
9G11		1															1
9G12	1																1
9G13			1														1
9G14	5	1															6
9G21	1							2									3
9G22								1									1
9G23			1														1
9G24	1																1
9G25	1																1
9G26	1																1
9G39				1													1
9G51					1												1
Total	14	2	5	2	1	1	4	5									34

Brackets

Description

A bracket, in general, is a device added to a joint or connection to provide additional support. In many cases such joints consist of members meeting at right angles and the bracket is a bar attached at approximately 45^{o} to either member with its end bent to allow for attachment. Since they can be used in situations outside of building construction, their presence can be noted here but their significance or position within a discussion of building hardware cannot be established.

Only a small number have been considered here and all of these are wrought. Other methods of manufacture are possible but not represented.

Variations

Variation 1 (Fig. 26f)

Manufacture: wrought

Form: A squared bar twisted for a distance along its centre with both ends spread, flattened, and bent at an oblique angle to the central section, resulting in their being approximately at right angles to each other; with several holes in each end

Use: Attached with fastenings through the holes in both ends; specific applications cannot be suggested.

Variation 2 (Fig. 26g)

Manufacture: wrought

Form: Consisting of a rectangular bar with both ends spread, flattened and bent at an oblique angle to the remainder, resulting in their being approximately at right angles to each other; one end is also twisted through 180°; holes in one end only at present

Use: Attached with fastenings through the holes in the end although no specific application can be suggested.

Distribution

The small quantity present does not constitute an adequate basis for discussions (Table 25). Of a total of five, only one is from a building area assigned to period I.

26 Lynch Pins: a, variation 1 (9G6D1-186). Clevis Pins: b, variation 1 (9G6E2-126); c, variation 2 (9G44T1-25). Pins: d, variation 1 (9G3C3-7); e, variation 2 (9G3E3-47). Brackets: f, variation 1 (9G51A2-167); g, variation 2 (9G4B21-34). Hooks: h, variation 1 (9G4A14-70). (NHSS RA-743 B)

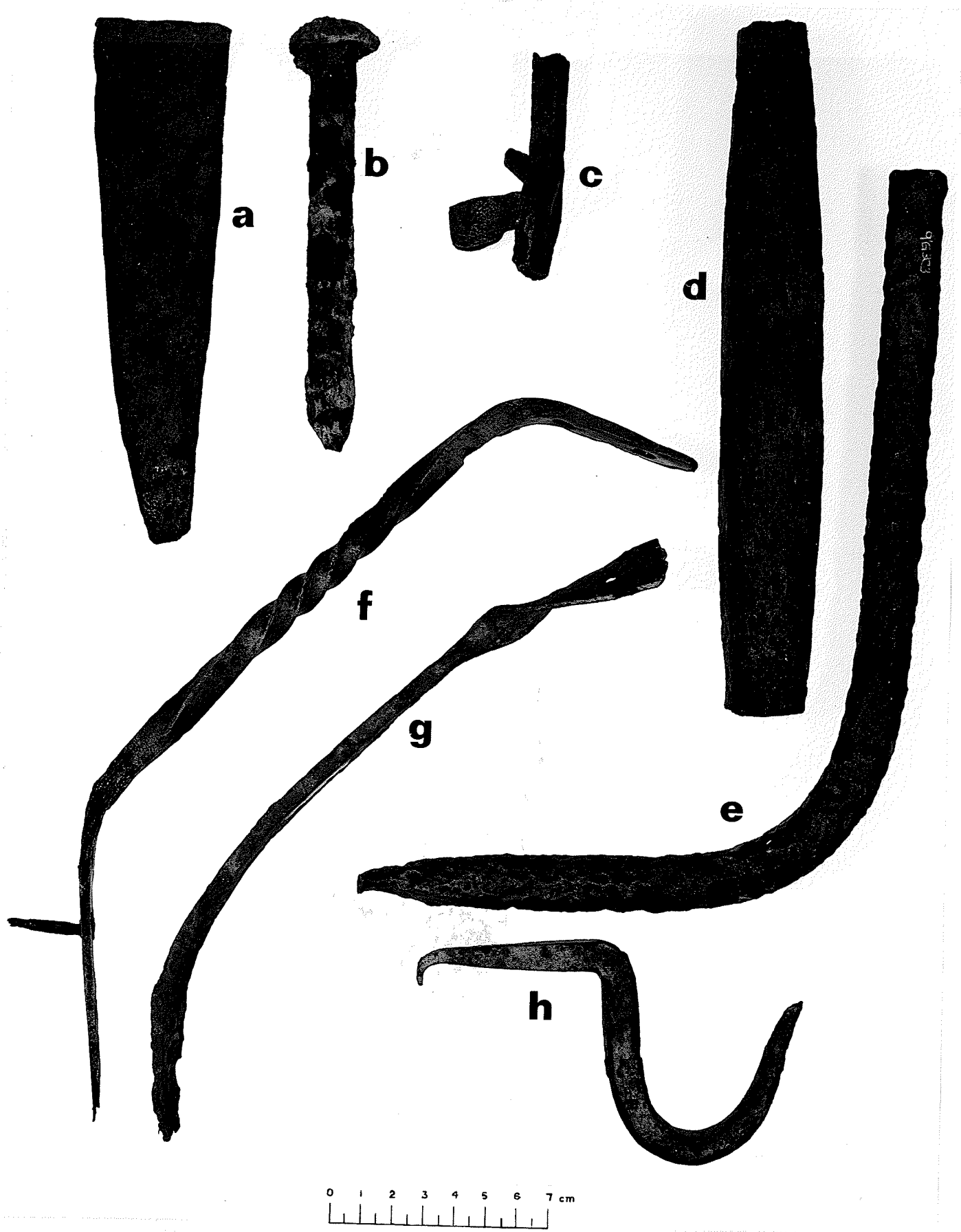

a
b
c
d
e
f
g
h
0 1 2 3 4 5 6 7 cm

Table 25	Bracket Distribution - 9G																
Variation / Provenience	1	2															Total
9G3	1																1
9G4	1	1															2
9G6	1																1
9G51	1																1
Total	4	1															5

Nails

Description

A nail is a fastening consisting of a relatively slender rigid piece of material for attaching or joining objects by being driven into or through them. It is most often made of some form of metal, usually iron or iron based compound or alloy although wood can and has been used. One end is usually spread to form a head, on which a force is directed to drive it in, and all or part of the remainder thinned in various ways to produce a point.

Identification can be either through form or use; in some cases a nail may not have a head, point, or either but it can still be identified if its application is known. However, in an archaeological context information on actual application is often not available and identification must be based on form. As a consequence, some items which were actually used as nails may remain unidentified since their form does not suggest such a use, to the exclusion of others. Items which have been designated as nails here are those with the necessary form and, consequently, could have been used as nails.

The earliest metal nails were hand forged by a technology known since at least 3000 BC (H.R.B. Smith 1966: 204). The manufacture involves the shaping of a bar of metal to produce the general appearance of the shank with the required taper, head, and point with the items being produced individually.

Normally the stock used would be rectangular/square in cross section and would be softened by heat prior to being shaped with blows from a hammer. As described by Mercer (1924: 171) a nail:

> was made from rectangular strips of malleable iron, several feet long, and about a quarter of an inch thick, called nail rods, which were furnished to the blacksmith or nailer, who, holding one of them in one hand, heated its end in his forge, and then, on the anvil pointed it with the hammer on all four sides. Next, he partly cut it, above the point, on the "hardy" with a hammer blow, and then, inserting the hot point into the swage hole, he broke off the rod and hammered the projecting end so as to spread it around the top of the hole; after which, the cooling, shrunken nail was easily knocked out of the orifice.

Although this description is somewhat simplified, the basic procedures are generally valid. The shortened rod would be reinserted into the fire to be reheated as the whole process was repeated. An alternate procedure in which the head is made first, with the stock held in a vise, then with the bar being cut off and the shank worked into a point has been described by a modern blacksmith, and characterized as the method he was trained to use for making nails. This method, however, does not appear in the literature as an alternative.

Although the process appears lengthy it probably takes less time to make a nail than to describe it. In comparison to more recent machine methods, however, it would be relatively slow. To achieve the variety of forms which are evident in a collection, other steps could be added or substituted in the general process above.

Originally the nail rods would also have been hand forged but this method was replaced by having them cut from a plate of metal in a machine referred to as a slitting mill. Even later they were also produced in a rolling mill which eventually replaced the use of slitting mills entirely. Slitting mills were in existence by the 16th century and rolling mills for bars were developed by the end of the 18th century (C.S. Smith 1966).

Wrought nails are generally recognized by several features. Primarily, they often display the scars of the process that produced them; flat surfaces will be slightly irregular, reflecting the individual hammer blows used. As they are also usually of wrought iron, rusting will emphasize the laminated nature of the material. Shanks are often squared with surfaces meeting in a noticeable sharp edge. This latter feature becomes more obvious when compared with later cut nails. Circular shanks may occur but, in these cases, it is usually also obvious that they have been derived from rectangular/square stock. Nails with circular shanks may be rectangular/square near the

point, undergoing varying degrees of edge bevelling until a circular cross section is approximated. Rectangular/square shanks usually taper on all four sides although in varying degrees; the taper on two opposite sides occasionally predominating. This situation is, however, not as simple as outlined in some discussions (Mercer 1924: 173; Fontana and Greenleaf 1962: 52). It may also happen that a shank has no taper except for the immediate area of the point. In general, wrought nails also present a considerable degree of variation and irregularity of form and length within a group of items assumed to be equivalents.

Hand forging was followed, and ultimately replaced for the most part, by various methods of machine manufacture. The first of these involved the cutting of narrow strips of metal from the end of a band which would be slightly wider than the length of the required nail. These strips were then headed. Points were the result of cutting the strips at an angle to produce a taper, the narrower end serving as the point. Although the early forms of such nails were apparently headed by hand (Nelson 1968; Mercer 1924: 172-2; Fontana and Greenleaf 1962: 54), this process was not recognized on any of the items in the collection except possibly one. Such nails are referred to as cut and the beginning of process for their production dates to the last quarter of the 18th century (Nelson 1968; Fontana and Greenleaf 1962: 44 ff.; Mercer 1924: 170).

Nelson (1968) provides further detail on changes in technology up to approximately 1830, reflected in formal differences. Again, these features were not recognized on items in the collection and the nails, presumably, were not the result of the earlier less refined technologies.

Cut nails are recognized, in part, through a greater degree of uniformity; items assumed to be equivalents are also similar. Shanks are usually rectangular/square and have a taper predominantly or exclusively on two opposite sides. Various steps in the manufacture may leave observable formal features but observations on these have not been undertaken in a systematic and detailed manner to allow for extensive discussion or recognition of specific nail variations here. Often cutting of the strips will leave a series of striations on surfaces in contact with the cutting device and perpendicular to the long axis of the shank. Rusting may obscure these in many of the examples. In addition, the cutting device may leave a ridge or groove on one or both of the other surfaces. The heading operation may also produce some rounding of the shank edges, at the upper end, as it is gripped in a clamp.

Cutting nails was followed by another machine process in which wire was cut into the required lengths and then provided with a head and a point. These are designated wire nails. They were apparently invented early in the 19th century, in France (Fontana and Greenleaf 1962: 47),

but did not gain in popularity for construction in the United States until the latter part of the last quarter of the 19th century (Fontana and Greenleaf 1962: 55). By the middle of the 19th century a French dictionary of industrial arts was already illustrating and describing a well developed machine for the manufacture of wire nails, designated as "Paris Points" (Laboulaye 1844: 851). Machinery for their production was apparently not available until the middle of the 19th century in the United States (Fontana and Greenleaf 1962: 47). A quarter of a century later American encyclopaedists could still say little more than "chests and boxes from the Continent of Europe and from Asia are found to be fastened with nails of this character" (E.H. Knight 1876: 2793), or that they "are well suited for, and principally used in, the construction of packing cases of willow or other soft woods which grow so abundantly on the Continent" (Benjamin 1882, Vol. II, 472). In 1891 the production of wire nails was still "mainly carried on by Continental firms" (J.B. Smith 1891: 19). They would, thus, probably not have been available for any of the construction on the site and possibly also not used for any repairs or alterations.

In North America wire nails are apparently always made from circular stock, at least this is the case for all known examples to date. They are characterized further by their

regularity and the absence of a taper except for the extreme point. The heading operation also leaves a series of short parallel grooves, perpendicular to the long axis of the shank, on the shank near the head. Wire nails with a square or oval cross sections are known but not from any definite North America contexts.

The manufacture of nails by casting is a process recorded in some references but their history or significance is vague at the moment. Cast iron nails are described as being for lathing for plaster (Benjamin 1882: Vol. II, 472; Nicholson 1823: 372; C. Knight 1851: 1239) although Nicholson also limits their use to fir lath. A patent for casting nails was registered by a Joseph Ashton, in Britain, on June 25th, 1771, specifying them to be "sheathing, rose, sharp, trunk, bullen, hob, scupper, clout, Flemish, and sparables, from cast iron" (Woodcroft 1969: 13). A small quantity in the collection have been designated as cast although all of them are of brass or some similar copper alloy, rather than iron. The significance of cast brass nails at the site is not clear. Except for two variations, representing a complete form and a head fragment, the total number is small, in many instances only one example of a variation occurs. The two other variations are associated almost exclusively with the copper sheeting of a powder magazine door in 9G3A5 (Fig. 49). Use of brass nails could also be associated with boat building where a non

corroding material would be an advantage. The small quantity of cast brass nails indicates a minor role in building construction.

The sequence of techniques for nail manufacture and the dates at which they were initiated are not necessarily a good indication for period of construction of a building in which nails of a specific technology were used. The argument has been advanced on several occasions that the development of a technology for the production of cut nail at the end of the 18th century resulted in a rapid decrease in the use of wrought nails at that time and that buildings with wrought nails must date from about 1800 or earlier (Mercer 1924: 170; Fontana and Greenleaf 1962: 44 ff.). The problems with such an approach have already been considered elsewhere (Priess 1972).

The technology of cut nails was developed primarily in the U.S.A. and this fact is reflected in the literature of the 19th century. Non American references of the first half of the 19th century tend to omit extensive discussion of advances in American cut nail technology. Holland (1831), for instance, does little more than mention it and Barlow (1851) provides only a brief discussion, giving no indication of the high degree of advancement already achieved in the U.S.A. by that time (Nelson 1968). In another instance, the use of a trip hammer to assist in the forging of nail heads, on hand forged shanks, was seen as an important advantage

in French nail manufacture in the second quarter of the 19th century (Anon. 1833), indicating the persistence of earlier technologies.

Variations

For ease and convenience of reference, nail variations have been designated and presented in a slightly different manner. They have been given a two part designation, the first being a letter to identify the type of manufacture and the second a number within a letter category. The letters for manufacture are as follows: wrought - A, cut - B, wire - C, and cast - D. Definitions for each variation have also been presented in a tabular form (Table 26) because of the large number (158) and the difficulty of comparing such a number of written descriptions. Attributes for the description have been listed, defined and discussed once, here, as to avoid lengthy repetition and confusion.

Variations are of two general kinds, either they represent whole nails or only some fragment. Fragments may be those with a head, which are divided on the basis of different head and shank attributes, or those without a head, which are all considered as a unit within their respective category of manufacture.

Attributes which have been used in defining the variations are as follows:

Head

Manufacture

Squared: having been shaped by a series of blows on the sides, perpendicular to the longitudinal are of the shank to produce relatively straight sides and a head with a general quadri-lateral outline; a quadri-lateral (rectangular/square) outline need not, however, have been squared (Fig. 27b, i; 28b)

Outline

Circular (Fig. 29a, b, d-f, h)

Rectangular/Square: being or approximating a right angled quadri-lateral with no distinction having been made whether it was actually a rectangle or square (Figs. 27h; 28a-c)

Sides Rounded: having sides which are slightly convex, with the overall impression of a quadri-lateral maintained (Fig. 28d)

Side View: perpendicular to the longitudinal axis of the shank

T: approximating the appearance of a "T" when seen from two opposite views; in this particular instance, the term is used almost exclusively in conjunction with the attribute rose head and applies to the form rose head which has

been altered to produce a T by flattening two opposite sides against the shank (Fig. 29j-k)

General Form: based on the general appearance of the upper surface with some possible comment on the lower surface

Rose: having an upper surface which consists of a number of facets, at an oblique angle to the horizontal, and which are distributed approximately around a central point; at least three facets must be present; the lower surface is generally flat (Fig. 27a-i)

Clasp: having an upper surface which consists of two or more facets, at an oblique angle to the horizontal, arranged on opposite sides of a central point or area; the lower surface is generally in the form of a peak when seen from two opposite sides; the characteristic can be combined with flat and bevelled corners in which the overall impression of a peaked lower surface and arrangement of facets on two opposite sides is maintained (Fig. 27j-n)

Flat: having a central, horizontal, plane surface; in most instances this surface is also the major portion of the upper surface (Fig. 28a-h)

Round: having an upper surface which is convex, often approaching a hemisphere; unless otherwise specified, the outline of such a head is assumed to be circular (Fig. 29h)

Slightly: having only a slight degree of convexity, consequently, approaching a flat head (Fig. 29f-g)

Block: approximating the appearance of a cube, consequently, being a relatively thick head (Fig. 29i)

Bevelling

Bevelled Edge(s) (Figs. 28a, b, d; 29d, e)

Bevelled Corners (Figs. 27m, n; 28f-h)

Countersinking

Countersunk: having a lower surface in the form of an oblique facet, or facets; the objective of countersinking is to provide a head which can be driven into a hole on which the edge has been bevelled, thereby allowing the head to penetrate further into the material (Fig. 29c)

Shank

Cross Section

Circular (Fig. 29p)

Rectangular/Square: as already defined (Figs. 27o; 28i-j; 29m-n)

Combination: where both of the above occur together, although on different parts of the shank, and are recorded as circular to rectangular/square, starting at the upper end of the shank (Fig. 29o)

Bevelling

Bevelled Edges (Fig. 29n)

Taper: some degree of taper can be assumed for all specimens unless a statement to the contrary is provided

Non Tapered: having no reduction in cross section except possibly in the area of the point (Fig. 28j)

Point

Sharp: being or approximating a single point (Figs. 27p; 29q)

Flat: terminating in a rounded edge, also with two opposite sides of the shank diverging at the beginning of the point (Figs. 27q; 28k)

Chisel: terminating generally in a straight edge, with no divergence of the sides of the shank (Figs. 27k; 28m; 29r-s)

Blunt: being an abrupt termination, with a surface perpendicular to the longitudinal axis

of the shank; such a point may have been intended as any one of the other three but was not brought to the same degree of completeness; for cut nails the attribute represents a definite and intentional form

Barbed: having a number of projections at or near the point, intended to provide a better grip in the material into which it may be driven. In all cases where these occur here they have been produced by making a series of cuts with a chisel or hardy along one or more edges of the shank and point (Fig. 29s)

Absent: used for head fragments, where no point is present

In addition to the above attributes, the term indeterminate has been applied in several instances where more specific information could not be recognized. The term general appears in the tabulated definitions to describe the first variation of wrought, cut, and wire nails and represents all fragments without a head, regardless of shank form, or point form (when present).

The question of use has not been taken into consideration for defining the variations and can only be given a brief discussion at this time. For the variations which occur in greatest quantities (Tables 27, 28), a range of functions should be anticipated; variations A2 to A5, for

instance, probably served for the majority of construction on most or all buildings. The longer nails also presumably served for heavy timbering, thus, variations A106 to A108, A69 to A70, and possibly A78, A79, A95 and A96 were intended primarily for heavy construction. Variations D10 and D11 are still associated with copper sheeting from a door (9G3A5; Fig. 49) but they could likely also have been used where a non corroding nail with a relatively large head was required.

In some instances it is also likely that similar forms were intended for the same use with the differences in form being considered inconsequential or even being unrecognized by the manufacturer and user. An example of such a case could be variations A106 - A108 where the only difference lies in the point.

The variations which have been defined for the collection are primarily a reflection of recognized differences in manufacture and form. They do not represent a conscious effort to group items into units which would have been recognized and considered significant by the original manufacturer and/or user although some degree of such recognition and significance presumably would exist. Differences in manufacture, from wrought to cut to wire, would certainly have been noticed by the user and also considered to be of some significance by him. It is also likely that differences which were of some importance to

either the manufacturer or user have been omitted because they were not recognized or their significance was not realized. The identification of cultural variations, based on data derived from documentation and detailed archaeological contexts must await the accumulation and evaluation of further data. In many instances, however, variations do have some correspondence in form with nails listed in a catalogue of nails from the early 19th century (PAC, C Series, C24, Vol. 1433).

A number of the variations are represented by a small number of specimens or possibly only one. In such cases it could be asked whether these, in fact, do represent anything different from the rest. Of the 158 variations listed, 87 have less than ten specimens and of these 39 have only one. For the brass nails, form can be recognized more easily because of an absence of corrosion and, thus, it is likely that the differences which have been recorded are relatively accurate. It is, however, likely, and in some cases actually appeared to be the case, that a cast form had been altered by forging, possibly on the cold metal, to produce a different head or point.

For the iron nails, some difficulties arose because of the extent of corrosion, the present form of an item being somewhat different than the original or at least appearing to be so. It is also likely that the process of hand forging as applied on an individual item was carried

out slightly differently on occasion resulting in a product which was supposed to be similar to others being produced at that time but was in fact slightly different.

The advantage provided by some of the attributes is not yet clear. The addition of bevelling to a rectangular/square shank requires additional work without any apparent advantage. For the shorter nails with edge bevelling this may actually be a case of using circular stock and reducing it to a quadri-lateral although it did not appear to be so. The addition of bevelling to the edges or corners of a rectangular/square head also does not appear to offer any advantage although it would reduce the sharpness of the edges. The differentiation of bevelling between the edges and the corners, however, does appear to be significant since the range of lengths for nails with either of these attributes are not the same, bevelled corners generally appearing on shorter nails than bevelled edges do (Fig. 38-41).

The question of nail length also requires some individual attention and discussion. The designation of nail length by the penny system is referred to in numerous references of various time periods, dating back many centuries (Benjamin 1882: Vol. II, 470; Durbahn 1961; Falconer 1815: 291; Anon. 1888: 72-3) and is apparently the major means of designating nail sizes in the U.S.A. today. Use of the penny system as a suitable means of

recording length for archaeological collections has also been suggested recently (Heite 1969) although the inadequacies of such a use have also been presented (Priess 1970). Another method of designating lengths or categorizing nails was in terms of pounds per thousand nails of a specific size (Dempsey 1851: 116-17; Tomlinson 1852: Vol. II, 308; Neve 1726), possibly combined with the penny system (PAC, RG8, C Series, C24, Vol. 1433).

Neither of the above system have been used for the present collection. To obtain a better idea of actual lengths present, it was decided to record measurements in inches instead. Measurements were of the complete nail, including the head. Initially, these were recorded to the nearest sixteenth but a plotting of frequencies of each length revealed that often the quantities at each sixteenth were substantially smaller than the eighth on either side. This was seen as an indication of a tendency by the cataloguers to measure to the nearest eighth and it was decided to round off all lengths to eighths. This was done by dividing the quantity at any sixteenth in half and adding one half to the next higher eighth and the other to the next lower. In the event of an odd numbered quantity, it was divided into unequal halves, so that only whole numbers would be used, and the larger half was added to the next higher eighth.

Presumably manufacturers of the nails in the collection worked with some concept or impression of what sizes nails should be. However a graph of the frequency of the different sizes recorded for wrought nails (Fig. 30) is not too helpful in suggesting what such sizes were in some instances. For the nails ranging in length from 1-1/2 in. to about 5 in. it appears that the objective was either increments of 1/4 in. or 1/2 in. Distinct peaks occur at 1-1/2 in., 2 in., 3-1/4 in., 3-1/2 in., 4 in., 4-1/4 in., and 4-1/2 in. For the larger nails, the quantities are much smaller and the significance of a peak is proportionately less. It could be suggested that idealized sizes were 6-1/2 in., 7 in., 7-1/4 in., 7-3/4 in., and 8 in. It is somewhat puzzling that distinctive peaks do not occur at a full inch, such as 3 in., 5 in., or 6 in.

The irregularity of wrought nail sizes should however, not be too difficult to justify. Although a manufacturer would be working with some mental concept of the size to be made, each item would be made individually and some difference would appear from one to the next. This would be compounded by differences from one day to the next, or even longer time spans, and the fact that many individuals would be involved in such manufacture. Possibly the idealized sizes could also vary from one individual to the next or in space and time.

The procedures and standards for some wrought nail manufacture can possibly be illustrated by reference to variations A106 to A108. The majority of specimens occur in two proveniences, representing construction for a similar structure and are generally similar in form, except for differences in the point. They are the only nail variations which are barbed. It is likely that they were intended for a similar use and were made at the same time. However, there does not appear to be any effort to produce items of a consistent size or sizes with lengths ranging from 7-3/4 in. to 11-3/8 in.

For cut nails the situation is not any more definite (Fig. 44). Since they are all the result of a relatively advanced technology it could be expected that sizes would be more standardized and regular. However, even here, frequencies between the peaks are relatively high. Definite peaks occur at 1-1/2 in., 2 in., 2-1/4 in., 2-1/2 in., and 3-1/8 in. and possibly also at 2-3/4 in. The peak at 3-1/8 in. could suggest that the ideal was 3 in. but was intended to be measured without the head. Observations on other cut nails and even modern wire ones show that some range of lengths appears among items intended to be identical.

Distribution

Distribution of nails has been presented in several different forms: frequency of variations per unit of

length for each operation and the site as a whole (Table 28), frequency of variations per operation (Table 27), and frequency of manufacturing types per operation (Table 29). In addition, the major variations of wrought and cut nails, (complete variations with frequencies exceeding 100) have been put into graphs for easier comparison (Figs. 30-46).

In discussions which follow, the term "countable nail" will appear occasionally and refers to any nail having a head, consequently, being either a complete nail or a head fragment. Since mends and cross mends are not practical and probably also not possible, this approach will assure that a fragment will not be counted twice in any of the frequencies considered in discussions.

The construction history of the site spans the period when the technology of cut nails was developed and to a great extent also perfected. By 1825-30 this technology was capable of producing a cut nail with a consistently well made head (Nelson 1968). It is thus conceivable that cut nails could have been used for construction of a number of buildings on the site except those which originated during period I. However, they only comprise a relatively small proportion (10.1 per cent) of the countable nails for the site as a whole (Table 29). To this must be added the fact that all countable cut nails, with the exception

of one specimen, are considered as products of the advanced technology after 1825-30. It is then obvious that cut nails do not play an important role in construction for most of the buildings and possibly do not play any role during construction of periods I to III.

Such a delay in the use of cut nails is, however, not unique; observations on collections from other sites such as Lower Fort Garry, Manitoba (Chism 1972) or Fort Beausejour, New Brunswick have revealed a similar situation. The introduction and development of a new technology for nail manufacture in the U.S.A. was not reflected in a change of nail variations used in some Canadian construction for many years. A study of nail patents also shows that an interest in the development of a wrought-nail technology persisted into the second half of the 19th century, more than half a century after nail-cutting technology had been introduced. In a similar fashion patents for nail cutting persisted after the introduction of wire-nail technology (Priess and Shaughnessy 1972).

The limited use of cut nails at Coteau du Lac can probably be attributed to the presence and influence of the British military which was responsible for the majority of construction. An early 19th century nail catalogue prepared for the use of the Office of Ordnance in Canada lists only one cut-nail form out of a total of 20 nail forms (PAC, RG 8, C Series, C24, Vol. 1433). A call for tenders in

1850 by the Commissariat at St. John, New Brunswick for the supply of some items including hardware lists only wrought and cast nails (PAC, RG 8, C Series, C11, Vol. 1764: 75). Even at the end of the 19th century the British military was still ordering some "hand made" nails (Great Britain War Office 1898: 49-50). It is thus probable that the British military persisted in the use of wrought nails throughout their presence at the site.

The presence of cut nails can either represent construction, repair or alteration at a late date or work done by individuals not associated with the British military. Cut nails were being produced in Montreal in the early 19th century (Kilbourn 1960: 5-6) although they were not specifically being advertised as cut nails until 1819 (The Montreal Herald, July 24, 1819, p. 3). Cut nails appear as a large quantity in only a small number of the operations, 9G4, 9G7, 9G12, 9G17 and 9G21, and for most of the buildings represented by these operations several consistent features appear. For each building, except 9G7 and 9G12, there was some form of occupation until 1870-72. For 9G12 the proximity of 9G21 could also be considered as significant.

Final occupation was also not of a military nature. Other buildings, such as those represented by 9G14, 9G22 and 9G24, were presumably still standing in 1872 but had little or no use after the 1820s and, consequently would have had less repair or alteration. For instance, 9G24 had

repairs in 1819 and an occupation in 1837 but was in ruins when buildings on the site were sold in 1872. It thus, appears likely that cut nails can be attributed largely to repair and alteration well into the 19th century and, furthermore, that they represent work done by non military projects or individuals.

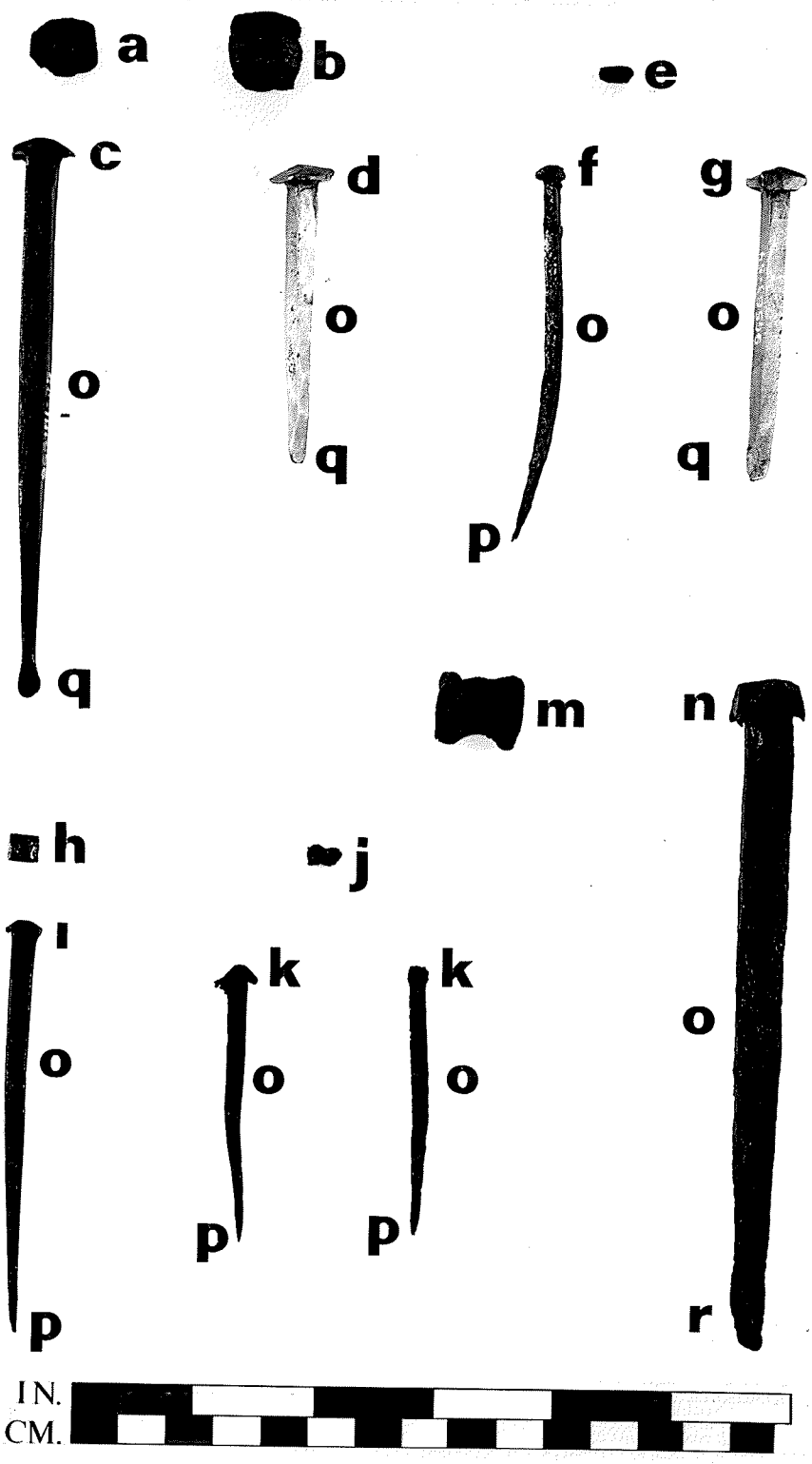
In two instances, 9G4 and 9G14, there is also a large quantity of wire nails, associated with buildings sold for removal in 1872. At present it does not appear likely that such nails were in general use for building construction during the life of these two buildings and must be attributed to later construction. The nature of such work is unknown since it is likely that wire nails were also not in general use for most of the life of the mill on the canal, the last recorded structure from the site.

Of the 117 variations representing complete nails, only 16 have frequencies in excess of 100 and of these 16, one is wire, two are cut (Figs. 45, 46) and 13 are wrought (Figs. 31-43). Of the 13 wrought, four (variations A2-5) total 8,395 out of a total of 11,449 complete wrought nails (excluding those from 9G1). Variations A2 to A5 represent some form of rose head on a rectangular square shank. If the remaining variations with some form of rose head or head derived from a rose head, including head fragments (variations A2 to A25) are considered as a group the domination of rose head as a wrought nail form becomes even more

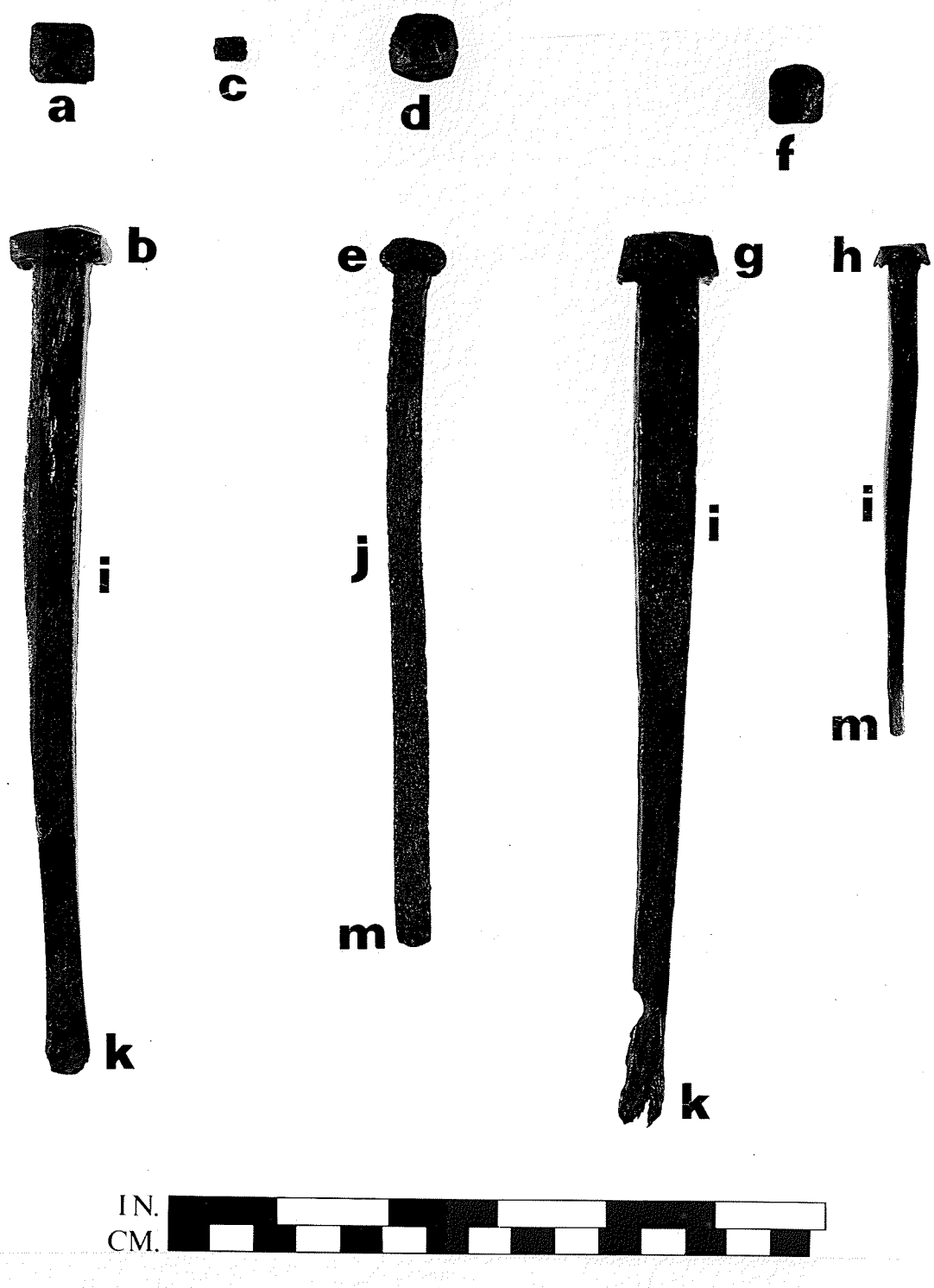
obvious; totalling 17,238 out of a total of 21,333 countable wrought nails (excluding those from 9G1). The rose head, generally combined with a rectangular/square shank is, thus, the dominant nail form and would have been used for much of the construction on a building. Other wrought variations of some lesser significance, at least in terms of quantity, are those having a flat head, being either rectangular/square in outline (variations A59-A85) or circular (variations A26-A58).

For complete cut nails, variations B6 and B7 are the major ones. In terms of general use the range of lengths for A2-A5 suggests an extensive range, possibly limited to some extent for A3, with more limited ranges for A26, A31, A69, A70, A78, A79, A95 and A96 because of a more limited range of lengths. Variations A26 and A31 would serve for lighter work such as lath, shingles, or metal sheeting with A69, A70, A78, A79, A95 and A96 used primarily for heavier timbers. For cut nails, variation B6 would be the general purpose form, probably equivalent to the present day common wire nail.

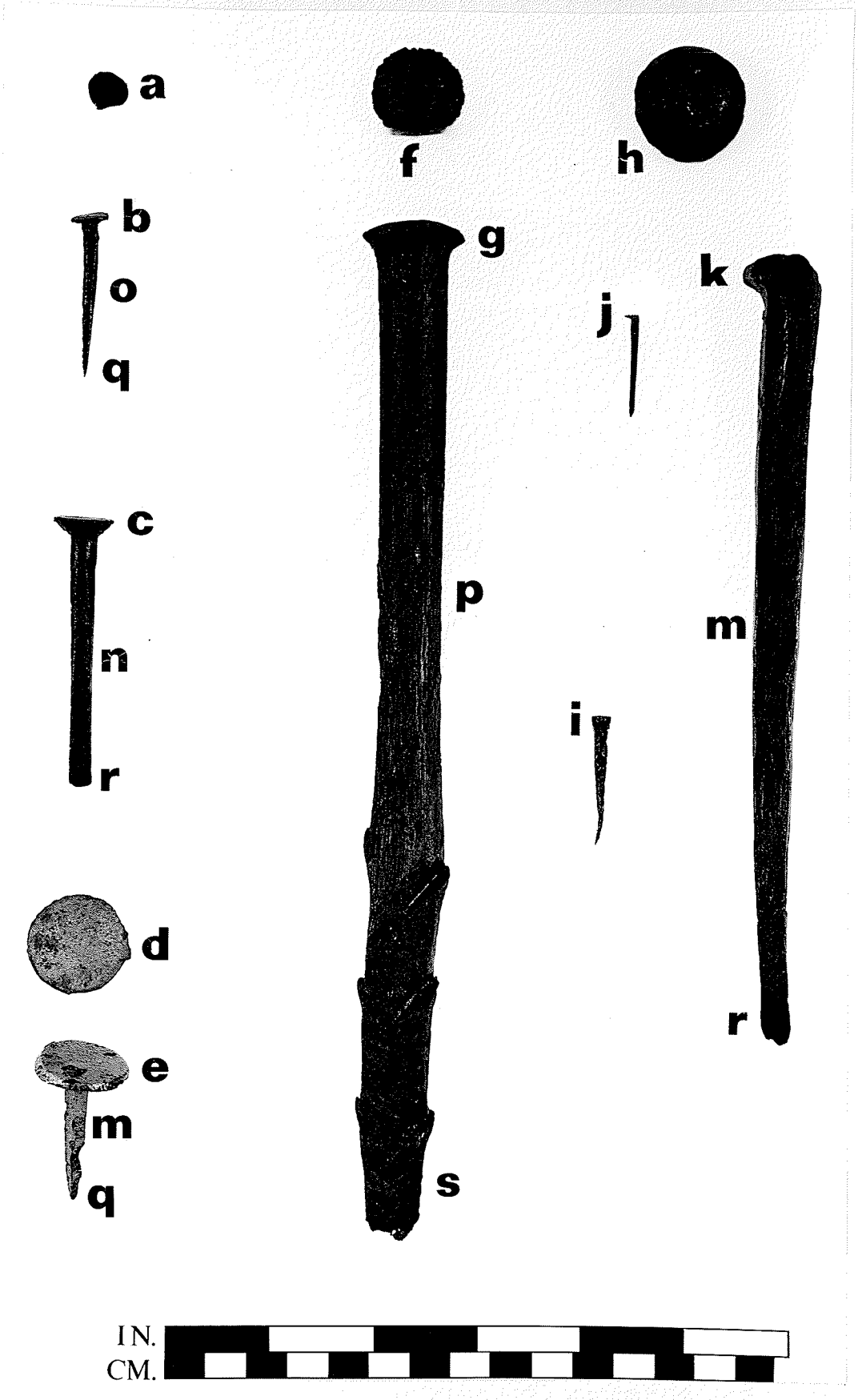
27 Nail Attributes, Head: a - d, rose; e - g, rose T; h, i, rose, squared; j - k, clasp; m - n, clasp, flat, bevelled corners. Nail Attributes, Shank: o, rectangular/square. Nail Attributes, Point: p, sharp; q, flat; r, chisel. (NHSS RA-1123 B)


a
b
e
c
o
q
d
o
q
f
o
p
g
o
q
m
n
o
r
h
j
l
o
p
k
o
p
k
o
p
IN.
CM.

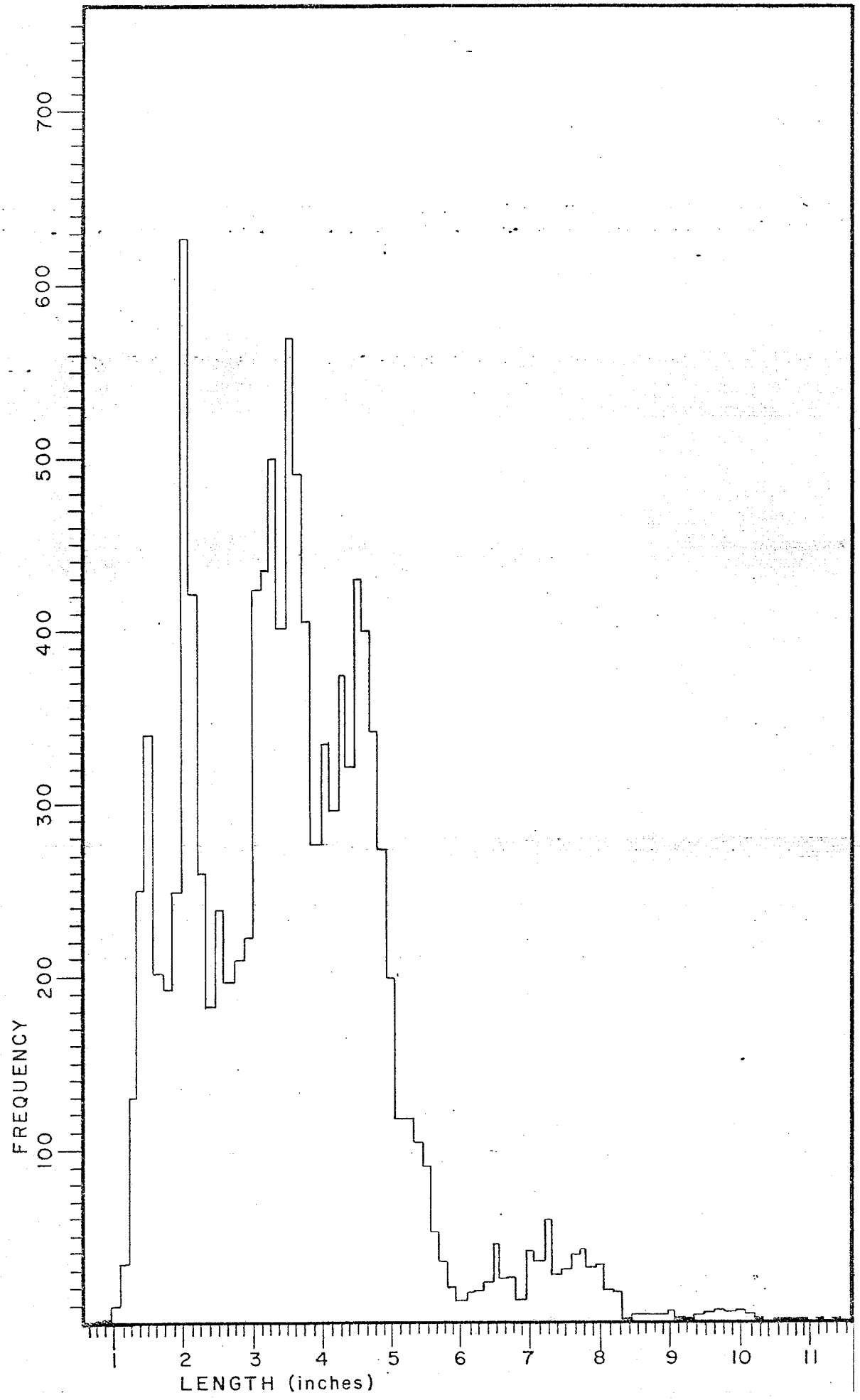
28 Nail Attributes, Head: a, flat, rectangular/square, bevelled edges; b, flat, rectangular/square, bevelled edges, possible squared; c, flat, rectangular/square; d, flat, rectangular/square, rounded sides, bevelled edges; f - h, flat, rectangular/square, bevelled corners. Nail Attributes, Shank: i, rectangular/square; j, rectangular/square, non taper. Nail Attributes, Point: k, flat, m, chisel. (NHSS RA-1121 B)


a
c
d
f
b
i
k
e
j
m
g
i
k
h
i
m
IN.
CM.

29 Nail Attributes, Head: a, b, flat circular; c, flat, circular, countersunk; d, e, flat, circular, bevelled edge; f, g, slightly round; h, round; i, block; j, k, "L". Nail Attributes, Shank: m, rectangular/square; n, rectangular/square, bevelled edges; o, circular to rectangular/square; p, circular. Nail Attributes, Point: q, sharp; r, chisel; s, chisel, barbed. (NHSS RA-1122 B)

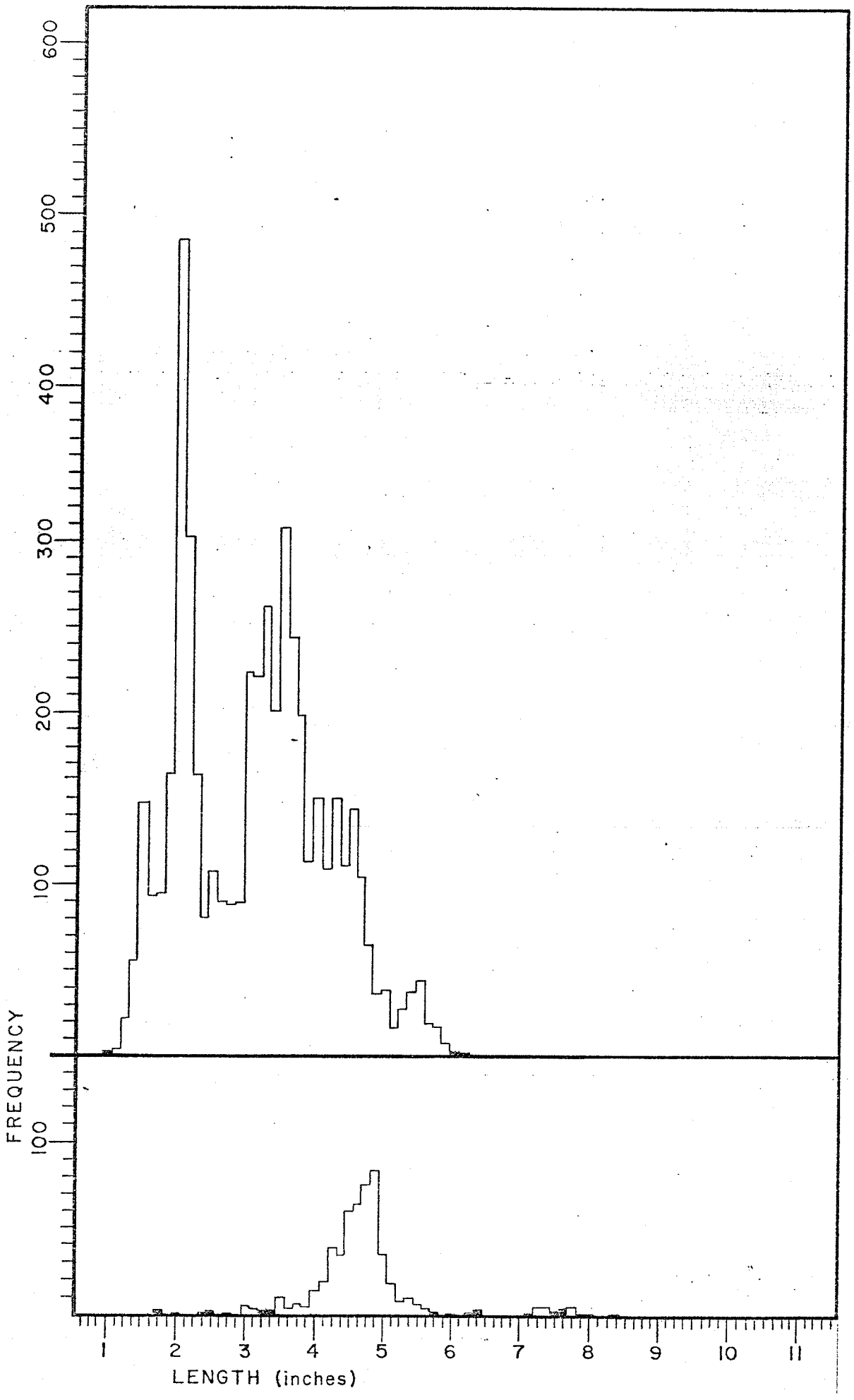

a
f
h
b
o
q
g
k
j
c
p
m
n
i
r
d
r
e
m
q
s
IN.
CM.

30 Frequency of lengths for wrought nails.


FREQUENCY
100
200
300
400
500
600
700
1
2
3
4
5
6
7
8
9
10
11
LENGTH (inches)

31 Frequency of lengths for nail variation A2.

32 Frequency of lengths for nail variation A3.


600
500
400
300
200
100
FREQUENCY
100
1
2
3
4
5
6
7
8
9
10
11
LENGTH (inches)

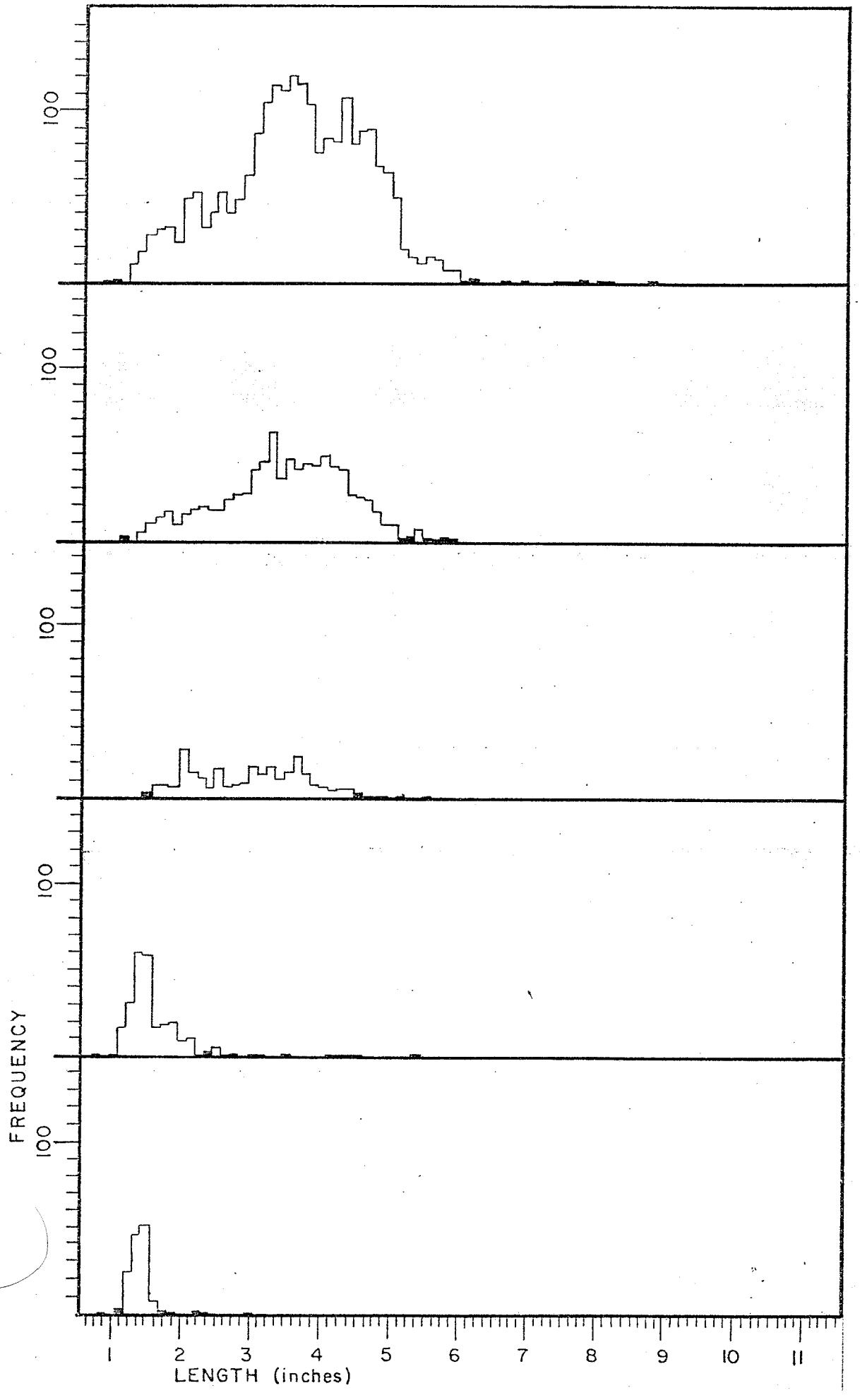
33 Frequency of lengths for nail variation A4.

34 Frequency of lengths for nail variation A5.

35 Frequency of lengths for nail variation A11.

36 Frequency of lengths for nail variation A26.

37 Frequency of lengths for nail variation A31.


100
100
100
100
100
FREQUENCY
1
2
3
4
5
6
7
8
9
10
11
LENGTH (inches)

38 Frequency of lengths for nail variation A69.

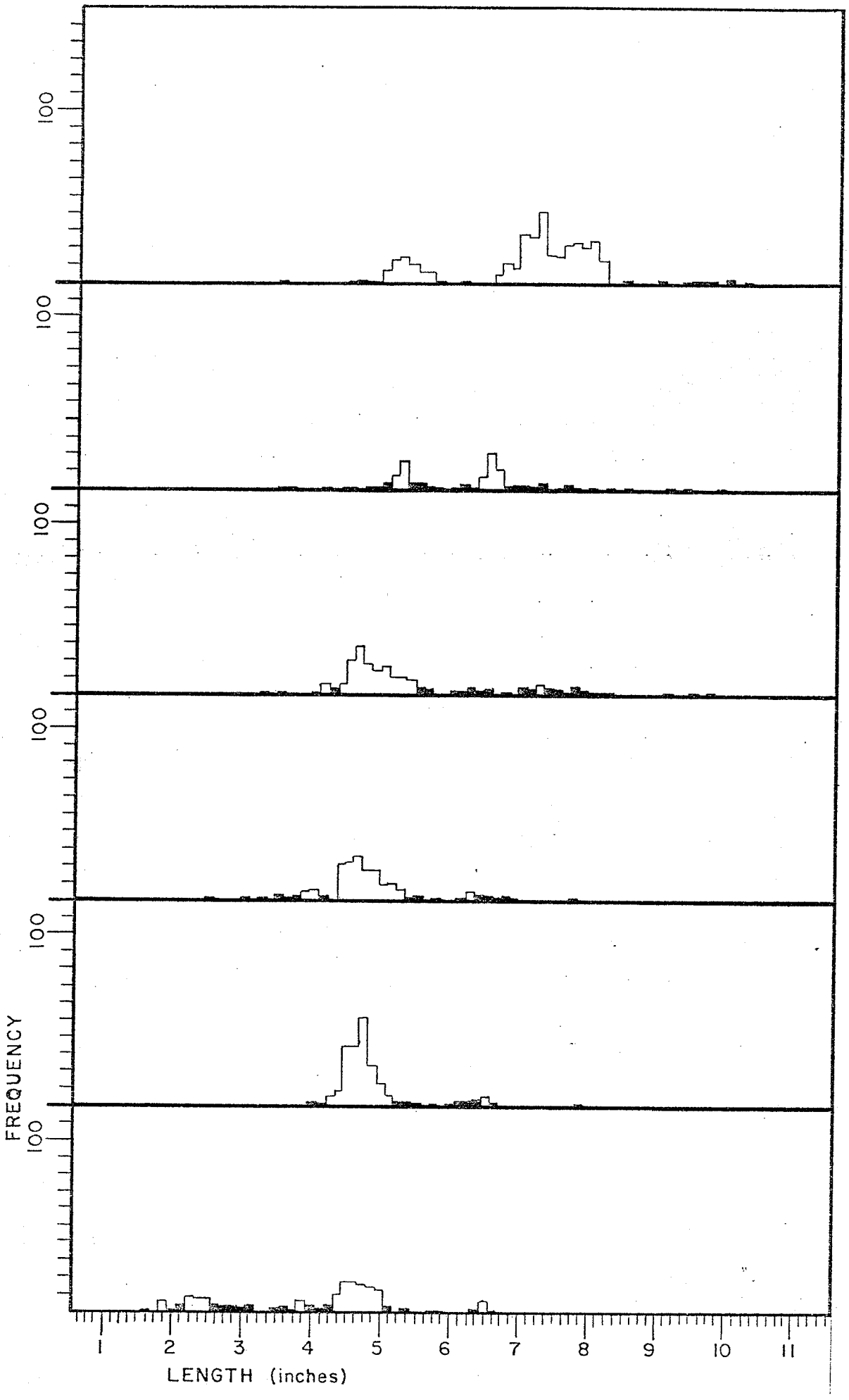
39 Frequency of lengths for nail variation A70.

40 Frequency of lengths for nail variation A78.

41 Frequency of lengths for nail variation A79.

42 Frequency of lengths for nail variation A95.

43 Frequency of lengths for nail variation A96.


100
100
100
100
100
100
FREQUENCY
1
2
3
4
5
6
7
8
9
10
11
LENGTH (inches)

44 Frequency of lengths for cut nails.

45 Frequency of lengths for nail variation B6.

46 Frequency of lengths for nail variation B7.

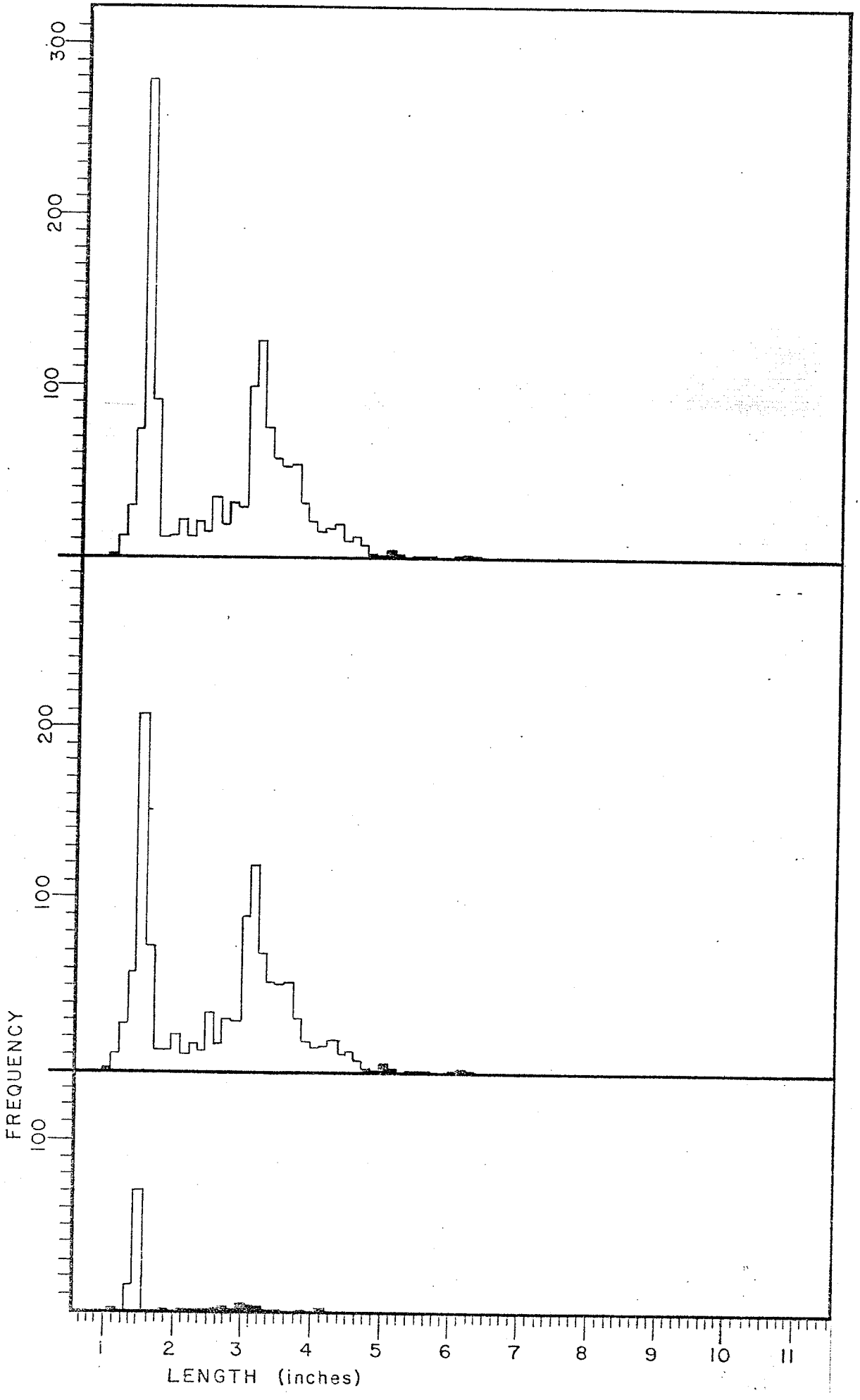

300
200
100
200
100
100
FREQUENCY
1
2
3
4
5
6
7
8
9
10
11
LENGTH (inches)

TABLE 26 NAIL VARIATIONS

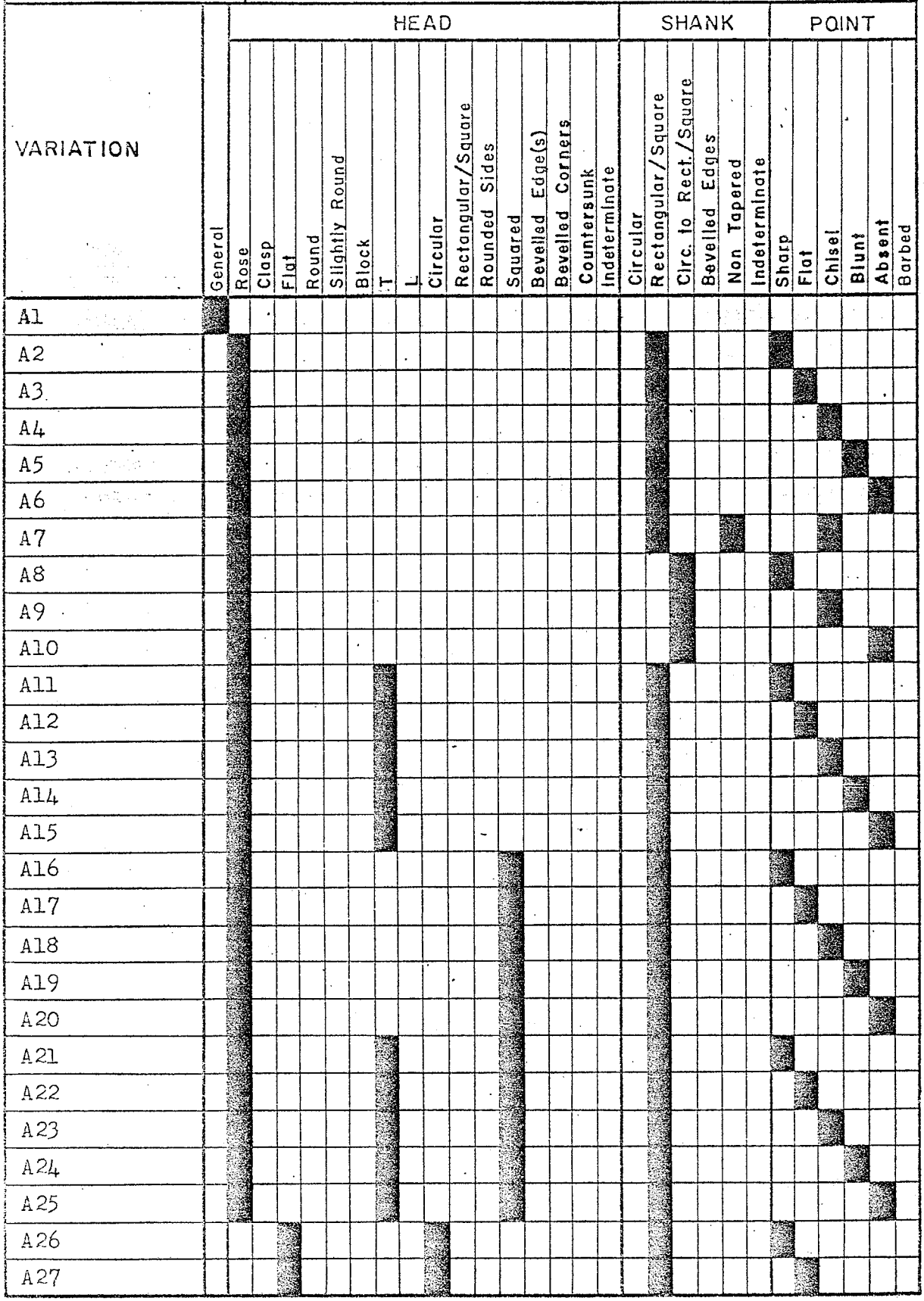


TABLE 26 (cont.) NAIL VARIATIONS

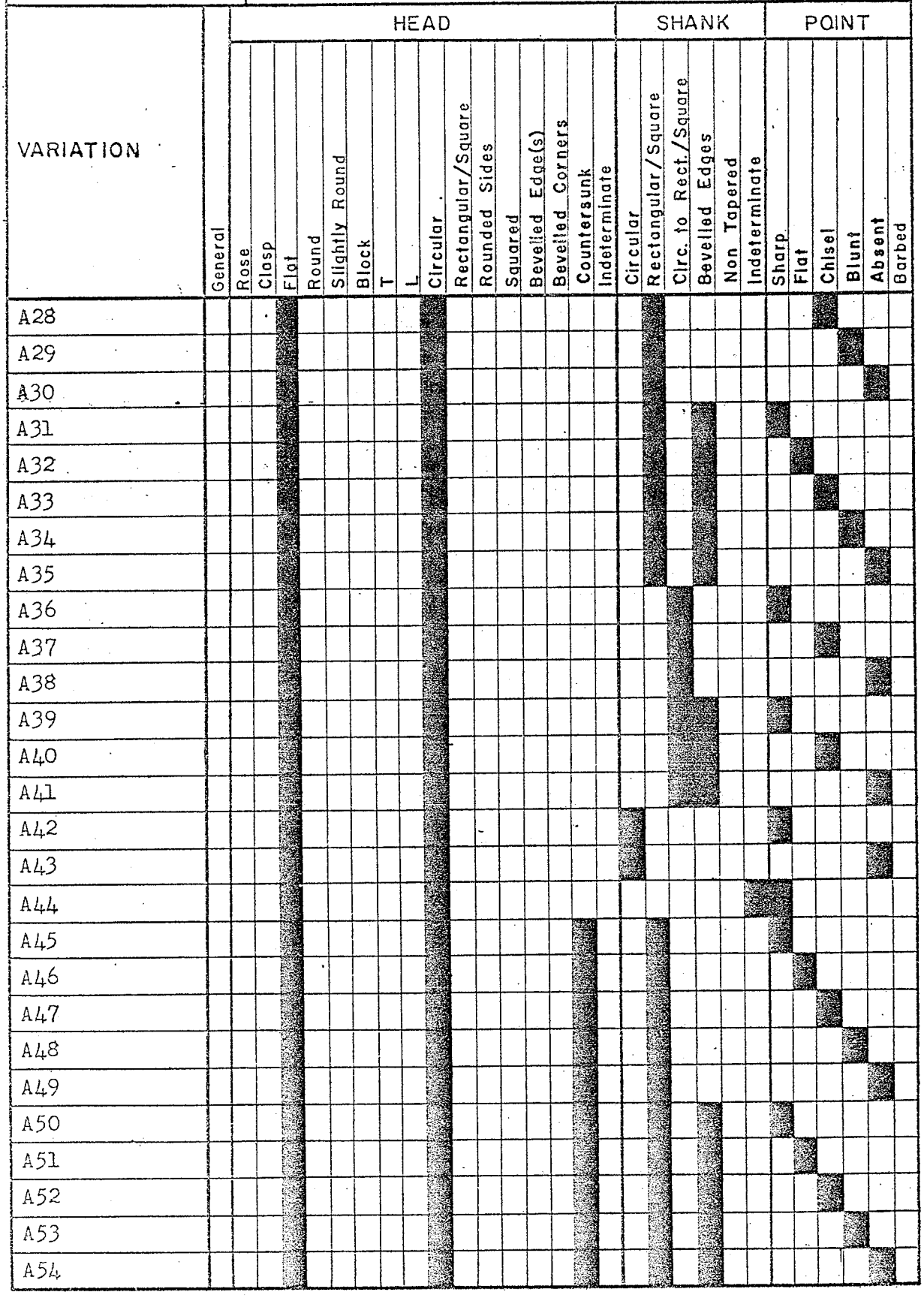


TABLE 26 (cont.) NAIL VARIATIONS

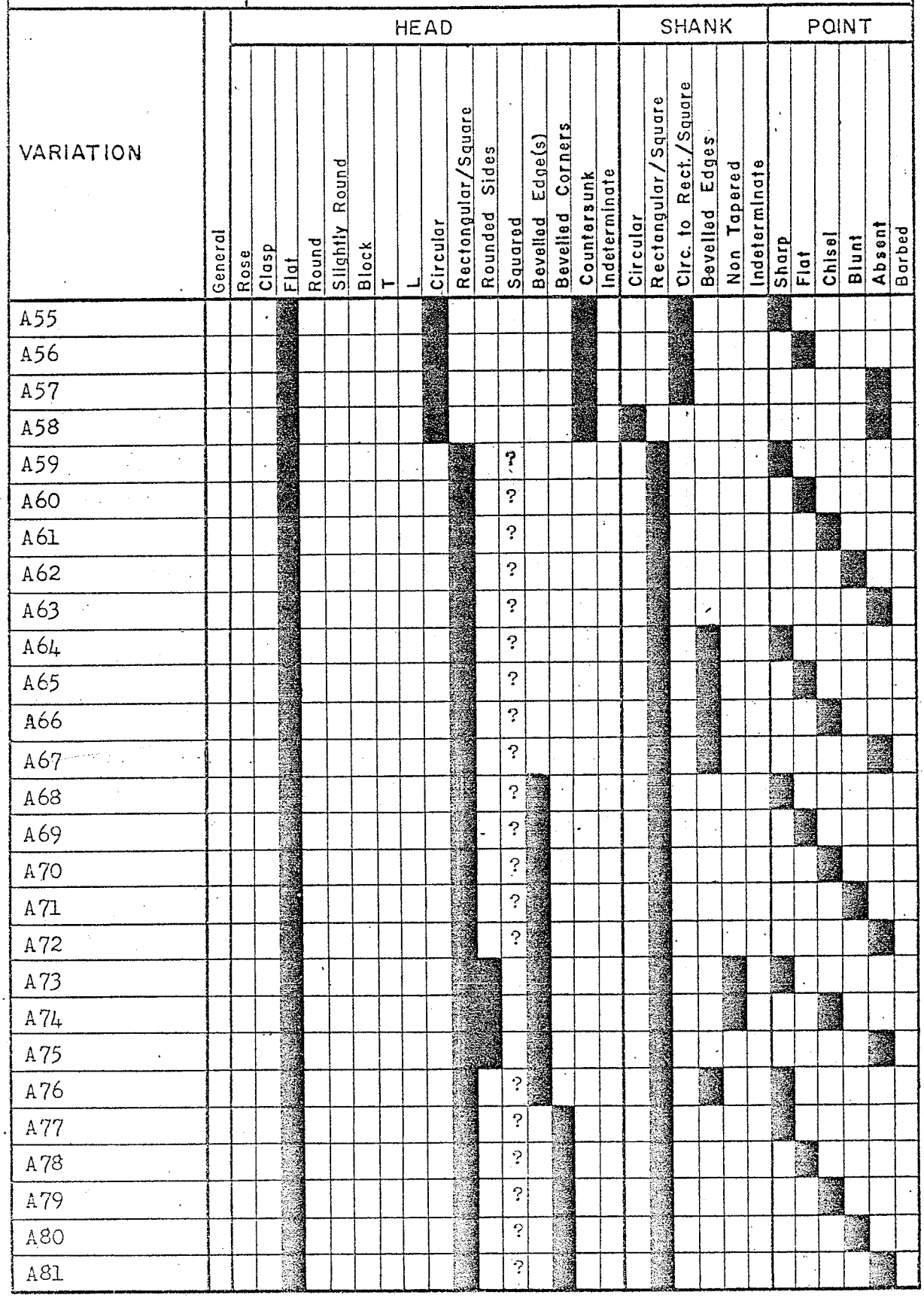


TABLE 26 (cont.) NAIL VARIATIONS

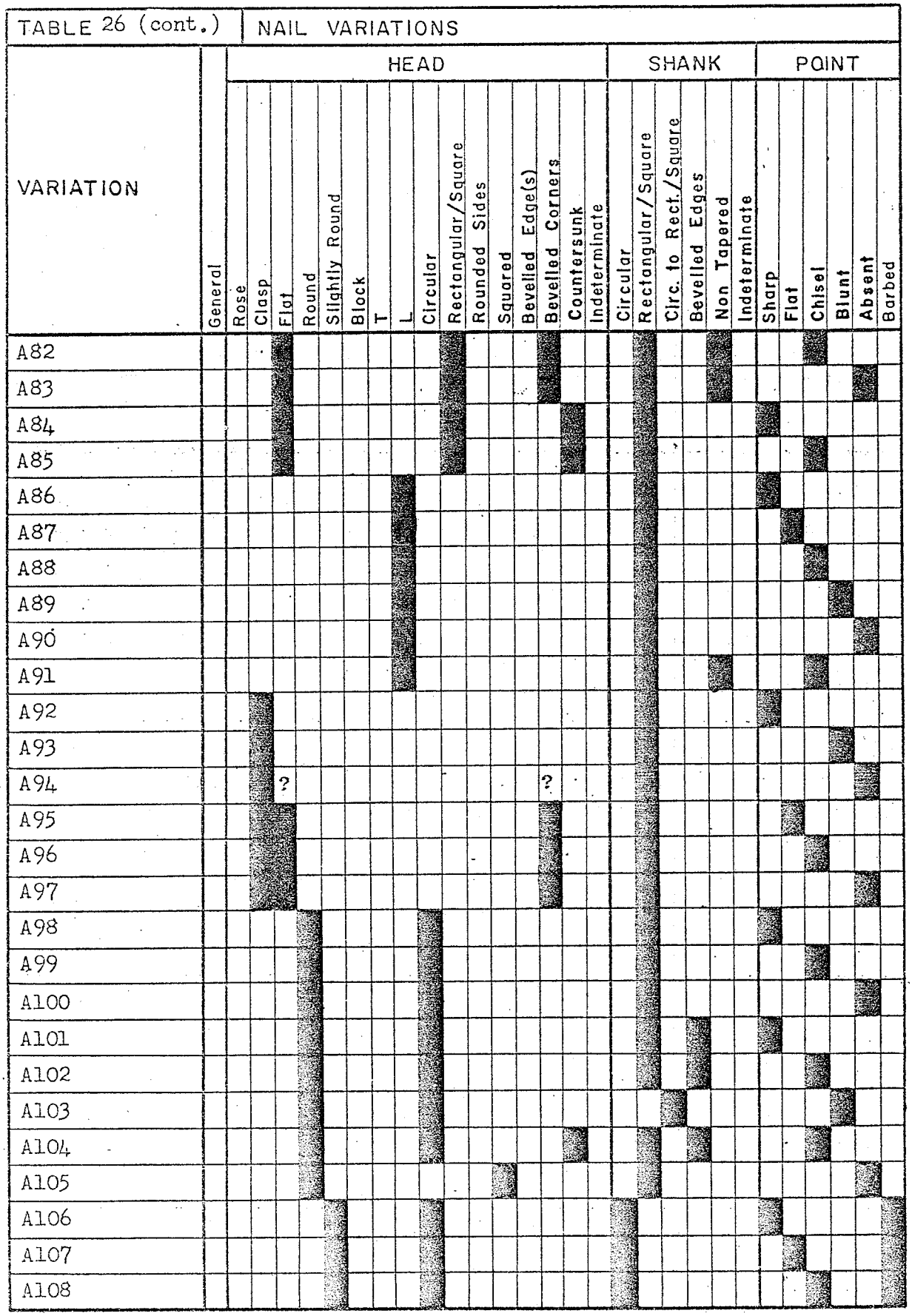


TABLE 26 (cont.) NAIL VARIATIONS

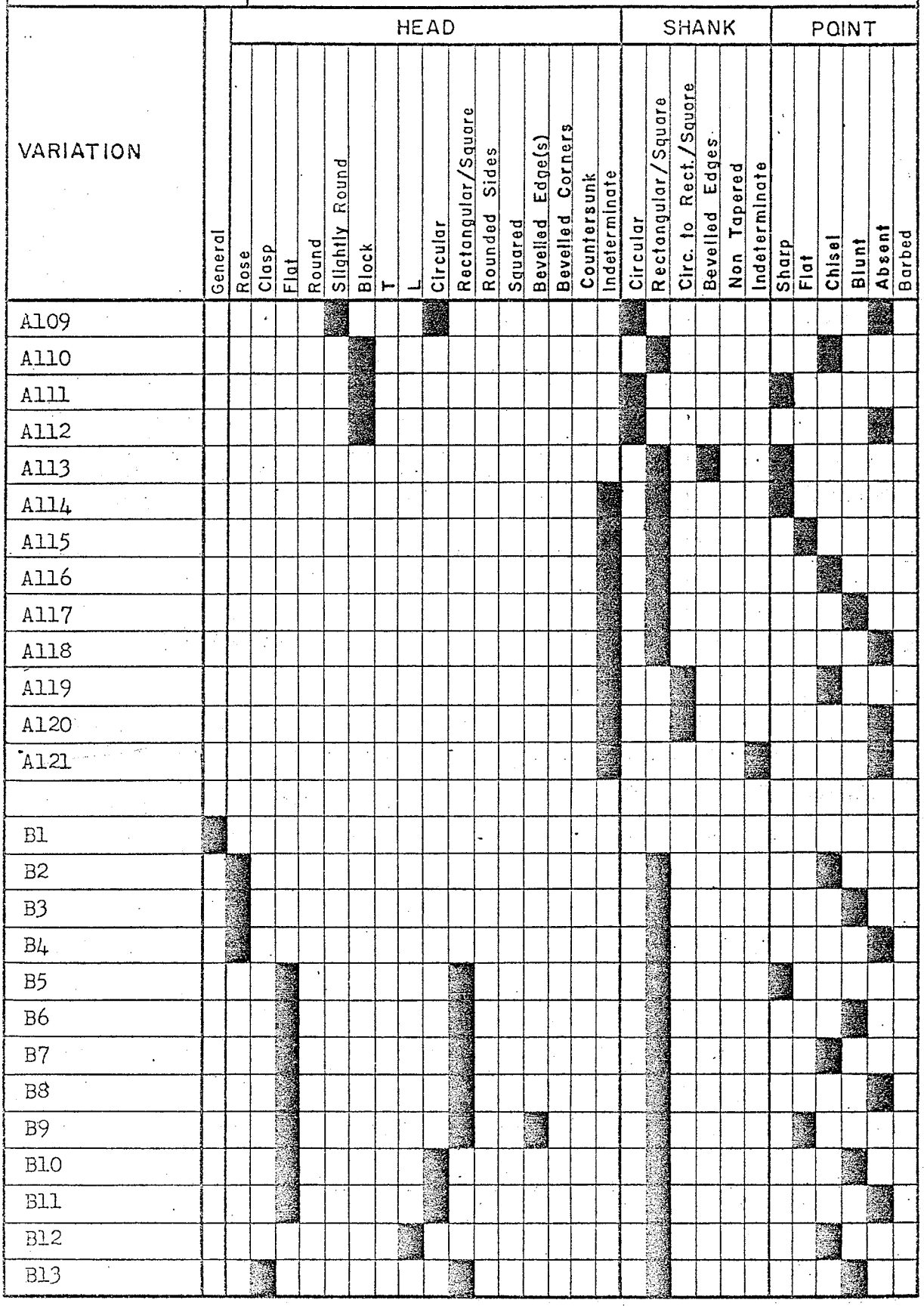


TABLE 26 (cont.) NAIL VARIATIONS

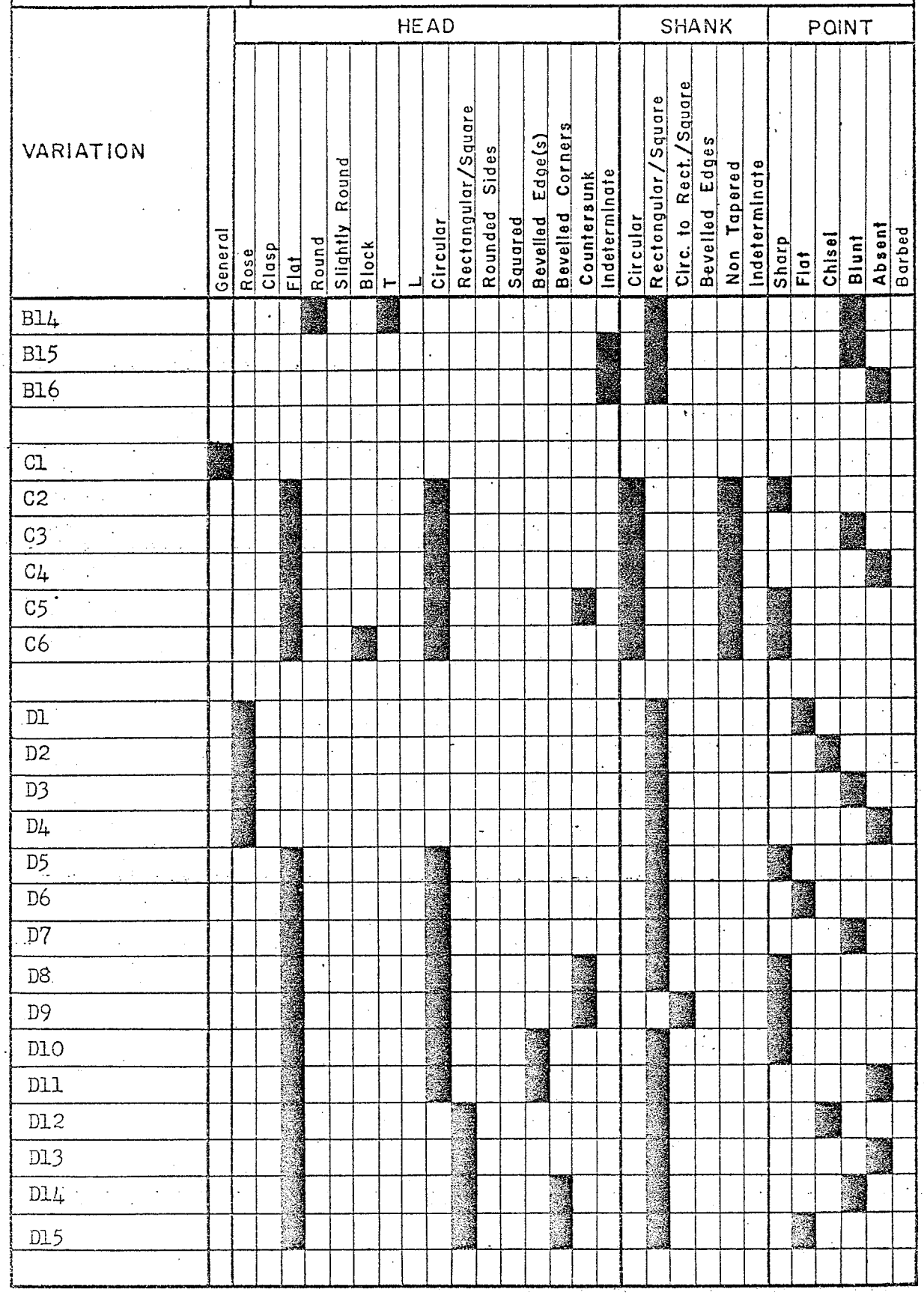


TABLE 27 NAIL DISTRIBUTION (Variation and Provenience) - 9G

Variation / Provenience	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14
9G2	35	34		6	14	26								1
9G3	244	519	155	73	18	406					55	5	12	1
9G4	777	2018	28	17	9	1570	1			6	147	1	1	
9G5	291	212	35	153	219	393								3
9G6	376	435	38	52	32	886				1	7		2	
9G7	295	58	15	149	67	343					5	1	5	
9G8	84	18	7	63	31	139								
9G9	290	57	21	379	68	582					7		9	1
9G10	1	1	5	11	1	9								
9G11	281	292	19	9	5	808					4			1
9G12	101	23	12	146	5	129					1		4	
9G13	61	68	3	11	11	117		1					2	
9G14	4	5	3	26	3	15					1			
9G15	284	467	62	54	90	301					10	3	8	9
9G17	54	74	1	191	15	67					8		21	1
9G18	49	101	6	10	13	79					1			
9G19	5	4		34	2	13								2
9G20	5	4				3								
9G21	31	34	11	5	9	61					6		2	5
9G22	125	8	11	77	19	218							3	
9G23	48	47	3	3	10	112					1			1
9G24	68	5	2	85	12	137							1	2
9G25	129	1	7	126	23	161					1			
9G26	202	103	12	8	9	226					1			
9G27	5		2	1	2	4								
9G28			3			2								
9G29	4			3		4								
9G30	1	1				2								
9G31	24	5	2	37	2	40								
9G32	94	141	13	30	141	114					8		1	5
9G33	1			2										
9G34				5		3								
9G37	47		3	47	3	52								
9G38	6	3	2	24	1	18			1			1	3	
9G39	143	56	7	234	7	395					2	2	4	2
9G40	26	2	3	1		46								
9G41	7					10								
9G42	14	8	2			25								
9G43						1								
9G44	10	5	3			55								
9G45	38	11				104								
9G47	11	3	1			12								
9G48	9	3				53								
9G51	127	5	8	67		172								
9G52				1										
9G54	4	5	1	1		4								1
9G55	11	2	2			11								1
9G56	1		1			3								
9G57	20	17	24	24	11	131					1	1		
TOTAL	4443	4855	533	2165	852	8062	1	1	1	7	266	14	78	36

TABLE 27 (cont.) NAIL DISTRIBUTION (Variation and Provenience) - 9G

Provenience \ Variation	A15	A16	A17	A18	A19	A20	A21	A22	A23	A24	A25	A26	A27	A28
9G2	1											4		
9G3	22	23		2		8	51		7	4	9	32		2
9G4	82	2				1	1				2	29		2
9G5	5											6		5
9G6	7	2	1	1	1	6	9	1	4	2	11	30		3
9G7	2											7		7
9G8	4													2
9G9	5								1	1		24		18
9G10	1													
9G11	20											13		
9G12	7											11		5
9G13	5	1			3	10					2	3		
9G14												1		
9G15	4								1			8		2
9G17	7											1		
9G18	2	2									1	3		
9G19														
9G20														
9G21	1		1		3	2							1	1
9G22	2											1		1
9G23	2				1	1								
9G24	1											23		
9G25	4											3		5
9G26	3	1				1				1	3	3		
9G27														
9G28														1
9G29														
9G30														
9G31	1											2		4
9G32	4											5		1
9G33														
9G34														
9G37												6		2
9G38												2		
9G39	6											21		11
9G40														
9G41														
9G42														
9G43														
9G44												1		
9G45	1											1		
9G47														
9G48	1													
9G51												14		2
9G52														
9G54														
9G55														
9G56														
9G57	2											2		1
TOTAL	202	31	2	3	8	29	61	1	13	8	28	255	1	75

TABLE 27 (cont.) NAIL DISTRIBUTION (Variation and Provenience) - 9G

Provenience \ Variation	A29	A30	A31	A32	A33	A34	A35	A36	A37	A38	A39	A40	A41	A42
9G2			2											
9G3	1	9	69		1	2		23	3		24	2	3	2
9G4	2	51						7	6	10				
9G5	5	10	3		4	4	3							2
9G6	1	19	1	1		1		13				1	2	2
9G7	8	6			1		1							
9G8	3	5	1											
9G9	7	24			2			1						
9G10														
9G11		55						8	7	6				
9G12	1	10			1									
9G13	1	2			1									1
9G14	1	3			1									
9G15	4	2	56		8	6	2		2					
9G17	1				1		1							
9G18	1	6	2				1	2						
9G19		3												
9G20								1						
9G21		2			1			1						
9G22	1	6												
9G23		3												
9G24	2	5			1									
9G25	1				3		1							
9G26	1	3												
9G27														
9G28														
9G29														
9G30														
9G31														
9G32	1	6	4			1								
9G33														
9G34														
9G37		2												
9G38							1							
9G39	1	15			3									
9G40		6								1				
9G41														
9G42		1												
9G43														
9G44		4								1				
9G45		7								1				
9G47		2												
9G48														
9G51		6	1											
9G52														
9G54								1						
9G55		1												
9G56														
9G57		2												
TOTAL	43	276	139	1	28	14	10	58	18	19	24	3	5	7

TABLE 27 (cont.) NAIL DISTRIBUTION (Variation and Provenience) - 9G

Provenience \ Variation	A43	A44	A45	A46	A47	A48	A49	A50	A51	A52	A53	A54	A55	A56
9G2										1				
9G3														1
9G4	2						1			2				
9G5	1			2	3	1	2	1	4	4		6		
9G6		1	1		2		1			1			1	
9G7														
9G8														
9G9														
9G10														
9G11	2													
9G12														
9G13			1				1			1	1			
9G14										1				
9G15						1		2		8	8	3		
9G17														
9G18														
9G19														
9G20														
9G21										3				
9G22					1									
9G23														
9G24					1					1				
9G25	2			3	5					5		1		
9G26												1		
9G27														
9G28														
9G29														
9G30														
9G31					2									
9G32					1				1	3		2		
9G33														
9G34														
9G37.				1										
9G38					1									
9G39			1		3									
9G40														
9G41														
9G42														
9G43														
9G44													1	
9G45														
9G47														
9G48														
9G51					1									
9G52														
9G54														
9G55														
9G56														
9G57										1				
TOTAL	7	1	3	6	20	2	5	3	5	31	9	13	2	1

TABLE 27 (cont.) NAIL DISTRIBUTION (Variation and Provenience) - 9G

Variation / Provenience	A57	A58	A59	A60	A61	A62	A63	A64	A65	A66	A67	A68	A69	A70
9G2							1							1
9G3			3	2			2	1					251	7
9G4	1		4	2	8	1	17						7	3
9G5	1		1	10	12	2	13						6	3
9G6		1	6	6	1	1	8					1	10	4
9G7				2	2		9						2	1
9G8				1	1	1	2		1					1
9G9			2		2	1	9						10	5
9G10														
9G11			6	4	5		31						2	
9G12				2	5		5						5	6
9G13			1	1	4		1			1			5	28
9G14													3	1
9G15			9		4	10	30	3				2	12	4
9G17							1			1			1	4
9G18					1	1								
9G19					1									
9G20													1	
9G21					1								8	4
9G22					1		8						4	1
9G23													1	
9G24				1	11									1
9G25				1	1	2	3						4	8
9G26						1	4					1		
9G27					1									
9G28														
9G29														
9G30														
9G31													2	4
9G32				1	2		2						6	11
9G33														1
9G34														
9G37														
9G38					1									3
9G39							1						3	12
9G40														
9G41							2							
9G42				5			5							
9G43														
9G44							1							
9G45							3							
9G47														
9G48														
9G51				4	6	1	9		1		1		6	6
9G52														
9G54														
9G55													1	
9G56														
9G57							1						2	1
TOTAL	2	1	32	42	70	21	168	4	2	2	1	4	352	119

TABLE 27 (cont.) NAIL DISTRIBUTION (Variation and Provenience) - 9G

Provenience \ Variation	A71	A72	A73	A74	A75	A76	A77	A78	A79	A80	A81	A82	A83	A84
9G2		2						1						
9G3		33						37	7					
9G4	2	6		4				10			9	2	1	
9G5	1	11				1		12	13	6	13			
9G6		18					1	12	3		18			
9G7		6			1		1	11	11	1	15			
9G8		1						2	3		1			
9G9	1	5						12	13	1	16			
9G10											1			
9G11		1					1	3	4		14			
9G12		1						12	21	1	14			
9G13		7						5	3	1	7			
9G14														
9G15	2	4		1			11	31	27	13	60			
9G17		1						1	3					
9G18														
9G19											1			
9G20		2						1			1			
9G21		2		4				12	4	1	14			
9G22		3						4	4		5			
9G23	1	1						2			3			
9G24		4						2	4		3			
9G25	1	6						1	6	3	15			1
9G26			10	1				4			5			
9G27														
9G28											1			
9G29		1												
9G30														
9G31														
9G32	1	14						1	5	1	4			
9G33														
9G34														
9G37		1		2					1		3			
9G38		3						1	3		1			
9G39		7						8	17		12			
9G40									1					
9G41									1		1			
9G42														
9G43														
9G44											1			
9G45	2	1												
9G47														
9G48														
9G51		9					2	6	11		12			
9G52														
9G54								1						
9G55														
9G56														
9G57														
TOTAL	11	150	10	13	1	1	16	192	167	28	250	2	1	1

TABLE 27 (cont.) NAIL DISTRIBUTION (Variation and Provenience) - 9G

Provenience \ Variation	A85	A86	A87	A88	A89	A90	A91	A92	A93	A94	A95	A96	A97	A98
9G2										5		1		
9G3			2			2				2	30	6	2	
9G4		4				2		12		25	2	4		1
9G5		1		1	1	2		14	13	27	17	9		
9G6						1		8	2	29	25	6	12	
9G7		1						4	7	19	12	25		
9G8								3	2	6	2	5		
9G9								3	2	25	21	15		
9G10														
9G11		3				6	1	27		73	18	15	5	
9G12								1	5	10	1	13		
9G13	1							3		1	1	1	2	
9G14										2				
9G15		2	1	1	1			3	2	12	9	5		
9G17						1				1		1		
9G18								4		3	4			
9G19										2	2	3		
9G20														
9G21								4	1	2	5	1	8	
9G22				1		1		1		7	4	2		
9G23										1	1			
9G24										4	18	14	8	
9G25						1			1	6	1	2		
9G26								3		17	19		12	
9G27									1	1	2			
9G28														
9G29												1		
9G30														
9G31														
9G32			1	1		1		1	2	4	3	3		
9G33														
9G34														
9G37								1		1				
9G38						3			1	1		1		
9G39									2	19	1	32		
9G40										3	1			
9G41														
9G42								1		1				
9G43										1				
9G44										4		1		
9G45						3		3		10	2			
9G47										1				
9G48										2				
9G51								1		13	9	9		
9G52														
9G54														
9G55	1													
9G56											2			
9G57														
TOTAL	2	11	4	4	2	23	1	97	41	340	212	175	49	1

TABLE 27 (cont.) NAIL DISTRIBUTION (Variation and Provenience) - 9G

Provenience \ Variation	A99	A100	A101	A102	A103	A104	A105	A106	A107	A108	A109	A110	A111	A112
9G2				1			1							
9G3														
9G4		1										1		
9G5		1			1				2					
9G6				1										
9G7	1										1			1
9G8														
9G9														
9G10														
9G11														
9G12									2					
9G13														
9G14														
9G15														
9G17														
9G18														
9G19														
9G20														
9G21				1										
9G22														
9G23														
9G24														
9G25		2	1											
9G26						1		1						
9G27														
9G28														
9G29														
9G30														
9G31														
9G32				1										
9G33														
9G34														
9G37													1	
9G38														
9G39		1	1							2				
9G40														
9G41														
9G42														
9G43														
9G44														
9G45														
9G47														
9G48														
9G51										1				
9G52														
9G54										26				
9G55										20				
9G56										1				
9G57														
TOTAL	1	5	2	4	1	1	1	1	4	50	1	1	1	1

TABLE 27 (cont.) NAIL DISTRIBUTION (Variation and Provenience) - 9G

Provenience \ Variation	A113	A114	A115	A116	A117	A118	A119	A120	A121		B1	B2	B3	B4
9G2											1			
9G3		4			1	3					1	1		
9G4		7		1		13					49		2	
9G5		1				8					3		1	
9G6		7	2		2	27					13		1	1
9G7		2	2		1	7					35			
9G8						3								
9G9		1	1			3							1	
9G10														
9G11	1	1		2		43					5			
9G12											17			
9G13											5	2		
9G14											2			
9G15		2				11					15			
9G17						1					26			
9G18		1	1											
9G19														
9G20														
9G21		3	1	1		10					5	1		2
9G22			1			2	1				2			
9G23		3			1	6					1			1
9G24							1				1			
9G25						1					5			
9G26		12	3	11	6	77			5		5			
9G27														
9G28											1			
9G29														
9G30														
9G31			1								2			
9G32			1			3								
9G33														
9G34														
9G37											3			
9G38											3			
9G39											3			
9G40						1								
9G41														
9G42														
9G43														
9G44											2			
9G45		1												
9G47														
9G48														
9G51								1						
9G52														
9G54						1								
9G55		2												
9G56														
9G57		3				2					1			
TOTAL	1	50	13	15	11	222	2	1	5		206	4	5	4

TABLE 27 (cont.) NAIL DISTRIBUTION (Variation and Provenience) - 9G

Provenience \ Variation	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	B15	B16		C1
9G2		8		8										
9G3		8		3		1	1					2		
9G4	1	402		222							1			4
9G5		21	1	38										
9G6		28		31		1								
9G7	1	75	1	103										
9G8		3	1	9										
9G9		7	3	22										
9G10		3		3										1
9G11		13	1	15		1			1		1	1		
9G12		55		58										
9G13		18		14		3	2							
9G14		5		1										1
9G15	8	41	12	82										1
9G17		275	107	110						1				
9G18	1			2										
9G19														
9G20			1											
9G21		23	2	21	1			1				3		
9G22		7	1	10										
9G23		3		4			1							
9G24		1	4	17										
9G25		18	4	39										
9G26		18		14										
9G27														
9G28				1										
9G29														
9G30														
9G31				3										
9G32	1	41		21										
9G33														
9G34														
9G37		4		11										
9G38		8		8										
9G39		20	1	48										
9G40		1		2										
9G41														
9G42														
9G43														
9G44		9		6										
9G45														
9G47														
9G48														
9G51		10		29										
9G52														
9G54		1												
9G55														
9G56														
9G57				1										
TOTAL	12	1126	139	976	1	6	4	1	1	1	2	6		7

TABLE 27 (cont.) NAIL DISTRIBUTION (Variation and Provenience) - 9G

Provenience \ Variation	C2	C3	C4	C5	C6		D1	D2	D3	D4	D5	D6	D7	D8
9G2									1					
9G3														
9G4	100												1	
9G5							2							
9G6	5						1			2				
9G7														
9G8	3													
9G9							1							
9G10	5													
9G11														
9G12	1													
9G13									1					
9G14	149		8	2										
9G15	5	2							1	1	1			
9G17														
9G18														
9G19														
9G20														1
9G21	1													
9G22	1													
9G23														
9G24	3													
9G25														
9G26	2										1	1		
9G27														
9G28														
9G29														
9G30														
9G31														
9G32	10													
9G33														
9G34														
9G37	2													
9G38	1													
9G39	7		1							1				
9G40														
9G41														
9G42														
9G43														
9G44	14		1											
9G45	16		3		6									
9G47														
9G48														
9G51								2						
9G52														
9G54														
9G55														
9G56														
9G57	1						1							
TOTAL	326	2	13	2	6		5	2	3	4	2	1	1	1

TABLE 27 (cont.) NAIL DISTRIBUTION (Variation and Provenience) - 9G

Variation / Provenience	D9	D10	D11	D12	D13	D14	D15			TOTAL				
9G2										154				
9G3		32	10							2242				
9G4						1				5708				
9G5										1646				
9G6										2250				
9G7										1350				
9G8										408				
9G9										1681				
9G10										42				
9G11										1834				
9G12										691				
9G13										424				
9G14		3								241				
9G15										1846				
9G17										978				
9G18										297				
9G19										72				
9G20										20				
9G21										327				
9G22										544				
9G23										262				
9G24										443				
9G25										614				
9G26	1						1			814				
9G27										19				
9G28										9				
9G29										13				
9G30										4				
9G31										131				
9G32										718				
9G33				1						5				
9G34										8				
9G37					1					194				
9G38										101				
9G39										1112				
9G40										94				
9G41										21				
9G42										63				
9G43										2				
9G44										119				
9G45										213				
9G47										30				
9G48										68				
9G51										553				
9G52										1				
9G54										46				
9G55										52				
9G56										6				
9G57										252				
TOTAL	1	35	10	1	1	1	1			31570				

TABLE 28 NAIL DISTRIBUTION (Variation and Length) — 9G

Length \ Variation	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19
3/4				1															
1		3		2															
		4			3														
1/4		22		12															
		56		18	6								3						
1/2		147		27	10						4								
		96		31	13						7		1						
3/4		95	3	32	17						7			2					
		167		24	9						6		5			1			
2		439	1	49	14						28		9	1					
		303		53	17						14		2	1					
1/4		163		33	19						11		3	1					
		80	1	41	16						5		2						
1/2		108	2	53	16						17		2	1					
		90		40	24						6			3					
3/4		88	1	48	27						7		4	1		1			
		89		62	26						8		1	2					
3		224	4	86	41						18		4	5		3			
		221	3	105	46						13		3	3		3			
1/4		262	2	116	63						18		3	3		1			
		201	2	112	35						10		7			3			
1/2		307	10	121	47						15	1	9	2		5		1	2
		243	3	116	41			1			24	2	3	2		8		1	1
3/4		198	5	104	44						13		6	2		1			
		112	4	76	43				1		7		2						
4		150	13	83	49						6	1	1	2		2			1
		108	19	82	42						4		1	3		1	1		1
1/4		150	38	107	41						5	2	4	1					1
		110	34	80	26						5	1	1						
1/2		144	60	87	25						3	1				1		1	1
		104	64	88	24						1	2	1						1
3/4		65	76	67	17						1	3	1						
		35	84	63	9						1								
5		37	34	48	9												1		
		18	17	19	3						1								
1/4		28	7	14	4							1				1			
		37	9	10	7														
1/2		45	5	15	3						1								
		19	3	14	3														
3/4		16	2	6	4									1					
		7		6	3														
6		2	1	1															
		1		2															
1/4			1																
			3																
1/2																			
				1															
3/4																			
				1															
7																			
			1																
1/4			4																
			4	1															
1/2			2	1															
			3	1															
3/4			4	2			1												
			1																
8			1	1															
				1															
1/4																			
			1																
1/2																			
				1															
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate		3	1	5	4														
TOTAL	4443	4855	533	2165	852	8062	1	1	1	7	266	14	78	36	202	31	2	3	8

TABLE 28 (cont.) NAIL DISTRIBUTION (Variation and Length) – 9G

Length \ Variation	A20	A21	A22	A23	A24	A25	A26	A27	A28	A29	A30	A31	A32	A33	A34	A35	A36	A37	A38
3/4							1												
1							1					1					2		
1/4							14		2	1		4			1				
1/2				1			31		8	4		24			1		12		
3/4							59		9	7		45		3	3		18	1	
				1			58		5	5		51					14		
							14		6	7		2					3		
							16		4			2		1			3		
2				1			17		1			1							
1/4							8		4	4				2	1				
1/2		1			1		10		3	1							1	1	
3/4							1		1	1		2							
				2			4		1	1		1			1				
		1			1		6		2				1	1			2	3	
3							1		1	1				1	1			2	
		1			1		2		1	1				1	1			3	
		4			1		1		4	3		1		3			1		
		4					1		2	1				2	1			1	
1/4		4		2					3					1	1		1		
		5		1					2	1				2				1	
1/2		17		2			2		2	1				1					
		15		2														1	
3/4		4			1				1					1				1	
		4												1				2	
4			1	1	1		1		1	1									
1/4							1											1	
1/2				1			1		1						1				
3/4					1					1									
								1										1	
5		1																	
1/4																			
1/2		1					2							1					
3/4																			
6																			
1/4																			
1/2																			
3/4																			
7																			
1/4																			
1/2																			
3/4																			
8																			
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate							1										1		
TOTAL	29	61	1	13	8	28	255	1	75	43	276	139	1	29	14	10	58	18	19

TABLE 28 (cont.) NAIL DISTRIBUTION (Variation and Length) – 9G

Length \ Variation	A39	A40	A41	A42	A43	A44	A45	A46	A47	A48	A49	A50	A51	A52	A53	A54	A55	A56	A57
3/4																			
1	2			1			1												
1/4	6			1			1		1										
1/2	10			1			1	1	1			1							
3/4	5			1								1		3			1		
2	1			1				1	1					1					
1/4								1	2				1	2					
1/2				1										1					
3/4														3	1				
3								1	1	1			2	4	4				
1/4		1						1	2				1	7	1		1		
1/2								1	2					3	1				
3/4		1						1	5	1			1	2	1				
4									1					1					
1/4		1							2										
1/2														1					
3/4									1					1	1				
5									1										
1/4																		1	
1/2																			
3/4																			
6												1							
1/4																			
1/2																			
3/4																			
7																			
1/4																			
1/2																			
3/4																			
8																			
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate						1													
TOTAL	24	3	5	7	7	1	3	6	20	2	5	3	5	31	9	13	2	1	2

TABLE 28 (cont.) NAIL DISTRIBUTION (Variation and Length) — 9G

Length \ Variation	A58	A59	A60	A61	A62	A63	A64	A65	A66	A67	A68	A69	A70	A71	A72	A73	A74	A75	A76
3/4																			
1																			
1/4		1			1		2												
		2			1		1												
1/2		2		1	1		1												
		3			1														
3/4		1			1														
2		4		1					1										
1/4		1		2															
		1		2															
1/2		1			1				1										
3/4				2															
		3		1	2														1
3				1	3														
1/4				2	1														
				2															
1/2		2	1	3	2							1	1						
		1	2										1						
3/4		1	1	1				1											
			1		3			1											
4		2		1	1								1						
1/4				1															
		1											1	1					
1/2		2	1								1	1	1						
		1		1								2							
3/4		1		1								1	2				1		
			1	4								1	2						
5			2	3								8	4						
			1	6	1							14	8	2					
1/4			5	6								15	17	1					
		1	4	2								11	4	2					
1/2		1	2									6	4						
				1								6	2						
3/4												1	1						
				1															
6				1									1						
			2									1	3						
1/4			2										1				1		
													7	1			1		
1/2													21	1			5		
			1	1								5	11						
3/4				1								12	2	1			3		
				1								9	3				1		
7				1							1	29	3						
				2								26	2						
1/4			2	1								42	4						
				1								16							
1/2			4	3								15	1						
			1	4	1							22	3	1			1		
3/4			1									24	1	1					
			1	2							1	20							
8			1	1							1	25	1						
			1									13							
1/4			2	2								8	1						
1/2												2	1						
3/4																			
9												2							
1/4													1						
1/2												1	1						
												2							
3/4			1									2							
			1									2							
10													1						
												3							
1/4												1							
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
indeterminate																			
TOTAL	1	32	40	70	21	168	4	2	2	1	4	352	119	11	150	10	13	1	1

TABLE 28 (cont.) NAIL DISTRIBUTION (Variation and Length) — 9 G

Length \ Variation	A77	A78	A79	A80	A81	A82	A83	A84	A85	A86	A87	A88	A89	A90	A91	A92	A93	A94	A95
3/4																			
1																			
1/4										2						2			
1/2										1						1	1		
3/4									1	1						2			
2										2	1					2	1		
1/4									1			1	1			1			
1/2			1													7	3		
3/4																8	5		
3			1													5	2		
1/4	1															5			
1/2	1	1	1	1								1	1			2	2		
3/4			3	1								1				1	1		
4	5		1	1				1		1		1				3	1		
1/4	3	1	2	1						1		1	1			9	2		
1/2	1	6	5	2								1				7	3		
3/4		3	6	2												5	3		
5	2	6	2	2												2	1		
1/4	1	19	20	1						1						6	4		
1/2	2	28	21	1						1		1				2	3		
3/4	1	17	25	3												4	1		
6	2	13	17	2						2						2	1		2
1/4		16	8	3							1					5	3		1
1/2		9	9	1												3			5
3/4		9	6	1						2						1	1		9
7		8	1													2	1		36
1/4		4	2																36
1/2		3	1													1	1		51
3/4		1	2	1															23
8		2	1								1						1		12
1/4		2	5			1													5
1/2		4	3			1													2
3/4		2	2																2
9		3	1							1									1
1/4		6	2	1											1				1
1/2		4	1																3
3/4		3	2																3
10		1	1								1								4
1/4		4	2																6
1/2		2	1																2
3/4		1	1																
11		1									1								
1/4		1																	
1/2				1															
3/4																			
indeterminate			1	1															1
TOTAL	16	192	167	28	250	2	1	1	2	11	4	4	2	23	1	97	41	340	212

TABLE 28 (cont.) NAIL DISTRIBUTION (Variation and Length) – 9G

Length \ Variation	A96	A97	A98	A99	A100	A101	A102	A103	A104	A105	A106	A107	A108	A109	A110	A111	A112	A113	A114
3/4																			
1																			
1/4																			
1/2																1			1
3/4	1																		1
2	6		1				1											1	3
1/4	1 4 8						1												5
1/2	7 7																		2
3/4	4 3					1													1 3 1 1
3	3 2																		3
1/4	4						1												2
1/2	2 3			1															2 2
3/4	1 7							1											1
4	4 2					1													1
1/4	4 10						1												1 1 1
1/2	17 17																		2
3/4	15 14																		1
5	12 3								1										
1/4	2																		
1/2																			
3/4	1 1																		
6																			
1/4																			
1/2	2 6																		
3/4	1																		
7															1				
1/4																			
1/2																			
3/4													1						
8													1 2						
1/4													1 1 4						
1/2													2 3						
3/4												1	4						
9													1						
1/4												1							
1/2												1	1 2						
3/4													3 3 5						
10											1		3						
1/4													5 1						
1/2													1						
3/4													1 1 1						
11													1						
1/4													2						
1/2													1						
3/4																			
Indeterminate																			17
TOTAL	175	49	1	1	5	2	4	1	1	1	1	4	50	1	1	1	1	1	50

TABLE 28 (cont.) NAIL DISTRIBUTION (Variation and Length) — 96

Length \ Variation	A115	A116	A117	A118	A119	A120	A121		TOTAL A		B1	B2	B3	B4	B5	B6	B7	B8	B9
3/4									1										
									2										
1									9							2			
									33							10	2		
1/4									131							28	2		
									249						1	58	15		
1/2									339				1			208	70		
	1		1						202							72	19		
3/4									191							11			
									248							11	1		
2									628							22			
									421						1	9	1		
1/4									259						1	16	1		1
									180			1			1	11	1		
1/2									239							34	1		
	1								194				1			15	2		
3/4	1								211				2			27	3		
									222						1	25	1		
3									425			1			1	90	5		
									436			1			1	120	4		
1/4			1						498				1		1	68	4		
			1						399			1				52	3		
1/2									566							50	1		
									487							52	1		
3/4									405						1	30			
									277						2	17	1		
4		1							335							13			
									294							14	2		
1/4									370							19			
	2								320							9			
1/2									431						1	11			
									399							6			
3/4									341							2			
		1							273							1			
5									199							5			
									118							2			
1/4									118										
									104							1			
1/2									90							1			
									50							1			
3/4									34										
									19										
6					1				11							1			
			1						16							2			
1/4									17							1			
					1				25										
1/2									45										
									23										
3/4									23										
									16										
7									40										
									34										
1/4									59										
									26										
1/2									29										
									38										
3/4									41										
									28										
8									32										
									17										
1/4									16										
									2										
1/2									4										
									4										
3/4									4										
									4										
9		1							7										
									3										
1/4									1										
									4										
1/2									6										
									6										
3/4									7										
									6										
10									7										
									5										
1/4									2										
1/2									1										
									1										
3/4									1										
									1										
11									2										
1/4									1										
1/2																			
3/4																			
Indeterminate	8	11	7						64										
TOTAL	13	14	11	222	2	1	5				206	4	5	4	12	1126	139	976	1

TABLE 28 (cont.) NAIL DISTRIBUTION (Variation and Length) – 9G

Length \ Variation	B10	B11	B12	B13	B14	B15	B16	TOTAL B	C1	C2	C3	C4	C5	C6	TOTAL C
3/4															
1								2							
1/4								12							
1/2								30							
3/4								74		1				1	2
2								279		1	1			1	3
1/4			1		1			91		3					3
1/2								11		1					1
3/4								12							
3	1					1		22		4				1	5
1/4	2							11		9					9
1/2	1							21		11					11
3/4	1							14		11					11
4								35		21				3	24
1/4						1		18		18	1				19
1/2								32		8					8
3/4								29		2					2
5								99		7					7
1/4								126		22					22
1/2								75		11					11
3/4								57		1					1
6								52							
1/4								53							
1/2								31		2					2
3/4								20		3					3
7								14		3					3
1/4								16		22					22
1/2								19		96					96
3/4								9		5					5
8								12		6					6
1/4								6		5					5
1/2								2		2					2
3/4								2		2					2
9								1		2					2
1/4								5		2					2
1/2								2		4					4
3/4								1		2					2
10								1		1					1
1/4								1		1					1
1/2								1		1					1
3/4								1		1					1
11								1		1					1
1/4								2		6			1		3
1/2								1		15			1		7
3/4										9					16
										2					9
										1					2
															1
Indeterminate				1				1							
TOTAL	6	4	1	1	1	2	6		7	326	2	13	2	6	

TABLE 28 (cont.) NAIL DISTRIBUTION (Variation and Length) – 9G

Length \ Variation	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	D14	D15		TOTAL D		GRAND TOTAL
3/4																			1
1																			2
1/4	1							1		6 18							6 20		11 51 181
1/2		1							1	6 4							7 4		332 625
3/4		1			1					1							2 2		298 205
2					1										1		1		260 656
1/4	1		1														1 1		442 292
1/2						1						1					1 2		206 300
3/4	1 2		1				1							1			2 4		233 255
3																			253 531
1/4																			584
1/2																			584 457
3/4																			618 540
4																			438 300
1/4																			352 332
1/2																			485 334
3/4																			449 410
5																			345 276
1/4																			206 122
1/2																			122 107
3/4																			91 52
6																			34 19
1/4																			15 25
1/2																			34 34
3/4																			47 24
7																			23 16
1/4																			40 34
1/2																			59 26
3/4																			29 38
8																			41 28
1/4																			32 17
1/2																			16 2
3/4																			4 4
9																			4 4
1/4																			7 3
1/2																			1 4
3/4																			6 6
10																			7 6
1/4																			7 5
1/2																			2 1
3/4																			1 1
11																			1 2
1/4																			1
1/2																			
3/4																			
Indeterminate																			
TOTAL	5	2	3	4	2	1	1	1	1	35	10	1	1	1	1				

TABLE 29 NAIL DISTRIBUTION (Manufacture) – 9G

Provenience \ Manufacture	WROUGHT			CUT			WIRE			CAST			TOTAL
	Complete	Head Fragment	Other Fragment	Complete	Head Fragment	Other Fragment	Complete	Head Fragment	Other Fragment	Complete	Head Fragment	Other Fragment	
9G1	665	1058	695	79	279	24	16	1	2	0	0	0	
	1753 (82.4%)			358 (16.8%)			17 (0.2%)			0			2128
	2448			382			1			0			2849
9G2	65	36	35	8	8	1	0	0	0	1	0	0	
	101 (85.6%)			16 (13.6%)			0			1 (0.8%)			118
	136			17			0			0			154
9G3	1438	501	244	10	6	1	0	0	0	32	10	0	
	1939 (97.1%)			16 (0.8%)			0			42 (2.1%)			1997
	2183			17			0			42			2242
9G4	2348	1800	777	406	222	49	100	0	4	2	0	0	
	4148 (85.0%)			628 (12.9%)			100 (2.0%)			2 (0.1%)			4878
	4925			677			104			2			5708
9G5	793	496	291	23	38	3	0	0	0	2	0	0	
	1289 (95.3%)			61 (4.5%)			0			2 (0.1%)			1352
	1580			64			0			2			1646
9G6	744	1047	376	30	32	13	5	0	0	1	2	0	
	1791 (96.2%)			62 (3.3%)			5 (0.3%)			3 (0.2%)			1861
	2167			75			5			3			2250
9G7	409	411	295	77	123	35	0	0	0	0	0	0	
	820 (80.4%)			200 (19.6%)			0			0			1020
	1115			235			0			0			1350

TABLE 29 (cont.) NAIL DISTRIBUTION (Manufacture) – 9G

Provenience \ Manufacture	WROUGHT			CUT			WIRE			CAST			TOTAL
	Complete	Head Fragment	Other Fragment	Complete	Head Fragment	Other Fragment	Complete	Head Fragment	Other Fragment	Complete	Head Fragment	Other Fragment	
9G8	147	161	84	4	9	0	3	0	0	0	0	0	
	308 (95.0%)			13 (4.0%)			3 (1.0%)			0			324
	392			13			3			0			408
9G9	688	669	290	10	22	0	0	0	0	1	0	0	
	1357 (97.6%)			32 (2.3%)			0			1 (0.1%)			1390
	1647			32			0			1			1680
9G10	18	11	1	3	3	0	5	0	1	0	0	0	
	29 (72.5%)			6 (15.0%)			5 (12.5%)			0			40
	30			6			6			0			42
9G11	451	1064	281	17	16	5	0	0	0	0	0	0	
	1515 (97.9%)			33 (2.1%)			0			0			1548
	1796			38			0			0			1834
9G12	283	176	101	55	58	17	1	0	0	0	0	0	
	459 (80.1%)			113 (19.7%)			1 (0.2%)			0			573
	560			130			1			0			691
9G13	163	155	61	23	16	5	0	0	0	1	0	0	
	318 (88.8%)			39 (10.9%)			0			1 (0.3%)			358
	379			44			0			1			424
9G14	46	20	4	5	1	2	151	8	1	3	0	0	
	66 (28.2%)			6 (2.6%)			159 (67.9%)			3 (1.3%)			234
	70			8			160			3			241

TABLE 29 (cont.) NAIL DISTRIBUTION (Manufacture) - 9G

Provenience \ Manufacture	WROUGHT			CUT			WIRE			CAST			TOTAL
	Complete	Head Fragment	Other Fragment	Complete	Head Fragment	Other Fragment	Complete	Head Fragment	Other Fragment	Complete	Head Fragment	Other Fragment	
9G15	964	429	284	61	82	15	7	0	1	2	1	0	
	1393 (90.1%)			143 (9.2%)			7 (0.5%)			3 (0.2%)			1546
	1677			158			8			3			1846
9G17	326	79	54	383	110	26	0	0	0	0	0	0	
	405 (45.1%)			493 (54.9%)			0			0			898
	459			519			0			0			978
9G18	153	92	49	1	2	0	0	0	0	0	0	0	
	245 (98.8%)			3 (1.2%)			0			0			248
	294			3			0			0			297
9G19	48	19	5	0	0	0	0	0	0	0	0	0	
	67 (100%)			0			0			0			67
	72			0			0			0			72
9G20	7	6	5	1	0	0	0	0	0	1	0	0	
	13 (86.7%)			1 (6.7%)			0			1 (6.7%)			15
	18			1			0			1			20
9G21	134	102	31	28	26	5	1	0	0	0	0	0	
	236 (81.1%)			54 (18.6%)			1 (0.3%)			0			291
	267			59			1			0			327
9G22	146	252	125	8	10	2	1	0	0	0	0	0	
	398 (95.4%)			18 (4.3%)			1 (0.3%)			0			417
	523			20			1			0			544

TABLE 29 (cont.) NAIL DISTRIBUTION (Manufacture) - 9G

Provenience \ Manufacture	WROUGHT			CUT			WIRE			CAST			TOTAL
	Complete	Head Fragment	Other Fragment	Complete	Head Fragment	Other Fragment	Complete	Head Fragment	Other Fragment	Complete	Head Fragment	Other Fragment	
9G23	75	129	48	3	6	1	0	0	0	0	0	0	
	204 (95.8%)			9 (4.2%)			0			0			213
	252			10			0			0			262
9G24	187	162	68	5	17	1	3	0	0	0	0	0	
	349 (93.3%)			22 (5.9%)			3 (0.8%)			0			374
	417			23			3			0			443
9G25	216	203	129	22	39	5	0	0	0	0	0	0	
	419 (87.3%)			61 (12.7%)			0			0			480
	548			66			0			0			614
9G26	202	367	202	18	14	5	2	0	0	4	0	0	
	569 (93.7%)			32 (5.3%)			2 (0.3%)			4 (0.7%)			607
	771			37			2			4			814
9G27	9	5	5	0	0	0	0	0	0	0	0	0	
	14 (100%)			0			0			0			14
	14			0			0			0			14
9G28	4	3	0	0	1	1	0	0	0	0	0	0	
	7 (87.5%)			1 (12.5%)			0			0			8
	7			2			0			0			9
9G29	4	5	4	0	0	0	0	0	0	0	0	0	
	9 (100%)			0			0			0			9
	13			0			0			0			13

TABLE 29 (cont.) NAIL DISTRIBUTION (Manufacture) - 9G

Provenience \ Manufacture	WROUGHT			CUT			WIRE			CAST			TOTAL
	Complete	Head Fragment	Other Fragment	Complete	Head Fragment	Other Fragment	Complete	Head Fragment	Other Fragment	Complete	Head Fragment	Other Fragment	
9G30	1	2	1	0	0	0	0	0	0	0	0	0	
	3 (100%)			0			0			0			3
	4			0			0			0			4
9G31	61	41	24	0	3	2	0	0	0	0	0	0	
	102 (97.1%)			3 (2.9%)			0			0			105
	126			5			0			0			131
9G32	397	154	94	42	21	0	10	0	0	0	0	0	
	551 (88.3%)			63 (10.1%)			10 (1.6%)			0			624
	645			63			10			0			718
9G33	3	0	1	0	0	0	0	0	0	1	0	0	
	3 (75.0%)			0			0			1 (25.0%)			4
	4			0			0			1			5
9G34	5	3	0	0	0	0	0	0	0	0	0	0	
	8 (100%)			0			0			0			8
	8			0			0			0			8
9G37	67	59	47	4	11	3	2	0	0	0	1	0	
	126 (87.5%)			15 (10.4%)			2 (1.4%)			1 (0.7%)			144
	173			18			2			1			194
9G38	48	27	6	8	8	3	1	0	0	0	0	0	
	75 (81.5%)			16 (17.4%)			1 (1.1%)			0			92
	81			19			1			0			101

TABLE 29 (cont.) NAIL DISTRIBUTION (Manufacture) – 9G

Provenience \ Manufacture	WROUGHT			CUT			WIRE			CAST			TOTAL
	Complete	Head Fragment	Other Fragment	Complete	Head Fragment	Other Fragment	Complete	Head Fragment	Other Fragment	Complete	Head Fragment	Other Fragment	
9G39	432	456	143	21	48	3	7	1	0	0	1	0	
	888 (91.9%)			69 (7.1%)			8 (0.8%)			1 (0.1%)			966
	1031			72			8			1			1112
9G40	8	57	26	1	2	0	0	0	0	0	0	0	
	65 (95.6%)			3 (4.4%)			0			0			68
	91			3			0			0			94
9G41	1	13	7	0	0	0	0	0	0	0	0	0	
	14 (100%)			0			0			0			14
	31			0			0			0			21
9G42	17	32	14	0	0	0	0	0	0	0	0	0	
	49 (100%)			0			0			0			49
	63			0			0			0			63
9G43	0	2	0	0	0	0	0	0	0	0	0	0	
	2 (100%)			0			0			0			2
	2			0			0			0			2
9G44	11	66	10	9	6	2	14	1	0	0	0	0	
	77 (72.0%)			15 (14.0%)			15 (14.0%)			0			107
	87			17			15			0			119
9G45	20	130	38	0	0	0	22	3	0	0	0	0	
	150 (85.7%)			0			25 (14.3%)			0			175
	188			0			25			0			213

TABLE 29 (cont.) NAIL DISTRIBUTION (Manufacture) – 9G

Provenience \ Manufacture	WROUGHT			CUT			WIRE			CAST			TOTAL
	Complete	Head Fragment	Other Fragment	Complete	Head Fragment	Other Fragment	Complete	Head Fragment	Other Fragment	Complete	Head Fragment	Other Fragment	
9G47	4	15	11	0	0	0	0	0	0	0	0	0	
	19 (100%)			0			0			0			19
	30			0			0			0			30
9G48	3	56	9	0	0	0	0	0	0	0	0	0	
	59 (100%)			0			0			0			59
	68			0			0			0			68
9G51	161	223	127	10	29	0	0	0	0	2	0	0	
	385 (90.4%)			39 (9.2%)			0			2 (0.4%)			426
	512			39			0			2			553
9G52	1	0	0	0	0	0	0	0	0	0	0	0	
	1 (100%)			0			0			0			1
	1			0			0			0			1
9G54	36	5	4	1	0	0	0	0	0	0	0	0	
	41 (97.6%)			1 (2.4%)			0			0			42
	45			1			0			0			46
9G55	29	12	11	0	0	0	0	0	0	0	0	0	
	41 (100%)			0			0			0			41
	52			0			0			0			52
9G56	2	3	1	0	0	0	0	0	0	0	0	0	
	5 (100%)			0			0			0			5
	6			0			0			0			6

TABLE 29 (cont.) NAIL DISTRIBUTION (Manufacture) – 9G

Provenience \ Manufacture	WROUGHT			CUT			WIRE			CAST			TOTAL
	Complete	Head Fragment	Other Fragment	Complete	Head Fragment	Other Fragment	Complete	Head Fragment	Other Fragment	Complete	Head Fragment	Other Fragment	
9G57	90	138	20	0	1	1	1	0	0	1	0	0	
	228 (98.7%)			1 (0.4%)			1 (0.4%)			1 (0.4%)			231
	248			2			1			1			252
TOTAL	12131	10982	5138	1376	1269	230	352	14	9	54	15	0	
	23113 (88.2%)			2645 (10.1%)			366 (1.4%)			69 (0.3%)			26193
	28251			2875			375			69			31570

Pins

Description

For present purposes, the term pin refers to a relatively slender rigid piece of metal which may have had some application in the assembly of a building. Although such an application cannot be indicated positively, some degree of possibility has been assumed. At no time are there conclusive factors which allow for a definite association with a building to the exclusion of all other uses.

In general, a pin functions by being fitted into an existing hole and serving to hold things in place or in alignment. Several more specific functional groups can be defined although, even here, the range of possible applications is extensive. Items designated only as a pin are of a very general nature and, although a function may be suggested for them, it cannot be maintained with any degree of certainty. Clevis pins are fastenings having similarities with a bolt but differing from a bolt in having one end perforated rather than threaded. This perforation is fitted with a lynch pin which prevents removal of the clevis pin from any specific application. Clevis pins may have uses similar to that of bolts with the added advantage of being easier to remove.

Variations

Pins

Variation 1 (Fig. 26d)

Manufacture: wrought

Form: A squared bar with the edges bevelled and tapered toward both ends

Use: No specific applications can be suggested positively although it may be possible to use it for alignment of stones in a wall.

Variation 2 (Fig. 26e)

Manufacture: wrought

Form: A circular bar with a sharp point at one end; other end not represented at present

Use: No specific applications can be suggested although the sharp point suggests the possibility of its having been driven.

Clevis Pins

Variation 1 (Fig. 17b)

Manufacture: wrought

Form: A circular bar with a head on one end and a linear hole in the other

Head: circular; round

Point: slightly flattened and tapered

Use: Intended as a fastening although specific applications cannot be suggested.

Variation 2 (Fig. 17c)

Manufacture: wrought

Form: A squared bar with a linear hole near one end; other end not represented at present

Point: slightly flattened on two sides

Use: Probably intended as a fastening although specific applications cannot be suggested; associated with a variation 1 of lynch pin in the hole.

Lynch Pins

Variation 1 (Fig. 17a)

Manufacture: wrought

Form: A flat triangular plate

Use: Similarity with lynch pins used on timber anchor variations 2 and 4 and clevis pin variation 2 suggests a similar application.

Distribution

In general the various pin types and their variations occur in insufficient quantities to allow for much discussion (Tables 30-32).

The presence of both pin variations only in 9G3 suggests a specialized application or construction not found elsewhere on the site. The nature of such specialization can, however, not be indicated. The largest quantity of lynch pins is also found in 9G3 where they presumably functioned with timber anchor variation 2 or 4; some of them are still attached to such timber anchors.

Table 30	Pin Distribution - 9G																
Variation / Provenience	1	2															Total
9G3	4	1															5
Total	4	1															5

Table 31	Clevis Pin Distribution - 9G																
Variation / Provenience	1	2	Ind														Total
9G6	1		1														2
9G9	1																1
9G18			1														1
9G44		1															1
Total	2	1	2														5

Table 32	Lynch Pin Distribution - 9G																
Variation / Provenience	1																Total
9G3	6																6
9G6	1																1
9G18	1																1
9G26	1																1
9G44	1																1
Total	10																10

Rivets

Description

A rivet is a fastening consisting of a relatively slender piece of metal with one end shaped into a head. In use it is inserted through holes in the material being joined and the end opposite the head is spread, or riveted, to produce a second head. A washer or plate may be inserted over the end before riveting to prevent the rivet from pulling through the material. It is also possible to use a nail in this fashion, driving it through the material, cutting off the excess and riveting the remaining end.

Rivets are used in a variety of situations and the ones included here as those which could have been used in a building although this cannot be considered as the only possible application.

Variations

Variation 1 (Fig. 25d)

Manufacture: wrought

Form:

Head: flat, circular, countersunk

Shank: circular; non tapered; end riveted with use of a washer

Variation 2 (Fig. 25e)

Manufacture: wrought

Form: Similar to those illustrated by Mercer (1960: Fig. 210)

Head: faceted, ranging from near flat to a rose head

Shank: rectangular/square with bevelled edges occasionally approaching circular; non tapered; end riveted with use of a washer

Use: Items of this nature have been used to join two layers of wood such as on a door or shutter but other applications would also be possible.

Distribution

Only a small number are present, primarily in areas of period I, specifically in 9G6 (Table 33) although no significance has been attributed to this situation.

Table 33	Rivet Distribution - 9G																	
Variation / Provenience	1	2	Inc															Total
9G3	1																	1
9G5		1																1
9G6		5	1															6
9G11		1																1
9G12			1															1
9G15		1																1
9G26		4																4
Total	1	12	2															15

Screws

Description

A screw is a fastening consisting of a relatively slender rigid piece of metal for attaching or joining two or more items by being turned into or through them. It is provided at one end with a head having some means of being gripped to facilitate its being turned by some special device designed for the purpose. Part of the remainder is provided with a helical ridge, known as the thread, which grips the material into which it is being turned and provides penetration during turning. Although a screw may be used for joining different kinds of material, in general, it must be turned into wood. If used for fastening metal, it is provided with a hole prepared in the metal. The advantage of the screw is that it can be removed relatively simply by reversing the direction of turn and turning it out, as it went in. A further advantage is its greater holding power derived from the way it fastens. The term wood screw is often used and refers to its being turned into wood but has no reference to the material of the screw. If a screw is made of wood, as may happen in some applications, it would be identified as a wooden screw.

The screw dates back many centuries into antiquity although for much of that time it was apparently not used to a great extent. Problems of manufacture provided the basis for a preference for other types of fastenings for

any general application (Kellerman and Treue 1962: 134 ff.). Kellerman and Treue (1962), Dickinson (1946) and Chamberlain (1967) have undertaken a discussion on the nature and history of the screw and provide the information that by the middle of the 18th century industries for the manufacture of screws had been established in several parts of Europe. Much of this was a form of hand manufacture, often carried out by large groups of women working in some form of factory. Manufacture was apparently the most advanced in England and France with the U.S.A. not involved until almost the end of the century.

Manufacture was by means of hand shaping of the shanks and cutting of the threads with some form of die. The use of circular wire was tried but apparently did not gain much favor. Improvements in cutting of the threads did not come until near the end of the century with the work carried out by Maudslay in England on improvements of the lathe.

One important improvement of the screw was the introduction of a point, thus making it unnecessary to drill a hole in the wood prior to its insertion. Machinery discussed and illustrated by Holland (1831-34: Vol. 1, 201) would not be capable of pointing a screw. Dickinson (1946: 84) indicates that a patent for machinery to produce pointed screws was registered in the U.S.A. in 1837; Mercer (1924: 187; 1960: 256) indicates a date of 1846 for the same process. Kellerman and Treue (1962: 272), however, also

state that an interest in methods for producing a screw with a point existed in the U.S.A. from approximately 1823 although the various attempts met with some degree of failure.

Screws from the collection have all been identified as wrought although this certainly takes in a considerable range of possibilities. In general, however, they display a degree of crudeness in the manner in which the thread has been cut and further in some cases suggest that the shank was altered from an original square bar. On many of the threads there are clear indications of where the metal has been deformed out of position without being removed by the thread cutter. In other words, thread cutters were not sufficiently refined to remove excess metal, some of it being left as a ridge on the shank.

In studying the screws, the number of threads per inch have not been included although there may be some value in recording such information for future collections. The situation which has been outlined for bolts would also probably have applied to screws. Although it is not possible to indicate the significance of a study of threads, it may be possible to establish variations within a site and attempt to relate these to events during the history of that site. At some point there may also be a possibility of relating such differences to varying sources of supply.

Variations

Variation 1

Manufacture: wrought

Form:

Head: flat; circular; countersunk; slotted

Shank: circular; non taper or slightly tapered

Point: blunt

Variation 2

Manufacture: wrought

Form:

Head: flat; circular; countersunk; slotted

Shank: rectangular/square, edges possibly bevelled; non taper or slightly tapered

Point: blunt

Variation 3

Manufacture: wrought

Form:

Head: flat; circular; countersunk; slotted

Shank: circular; tapered

Point: sharp

Variation 4

Manufacture: wrought

Form:

Head: round; circular; slotted

Shank: non taper

Point: blunt

Distribution

Many of the specimens in 9G3 and 9G4 (Table 34) are associated with one of the cast iron hinge variations. However, in other operations there does not always appear to be such an association, hinges occur without screws and screw without hinges, and, consequently, it is not possible to support without reservation Mercer's contention (1960: 259) that the use of cast hinges precipitated an increased use of wood screws.

Table 34	Screw Distribution - 9G																
Variation / Provenience	1	2	3	4	Ind												Total
9G3	46	3	1	3													53
9G4	35		2	1	31												69
9G5	3			4	1												8
9G6	2				2												4
9G7	3																3
9G9	1				1												2
9G12	1				1												2
9G14	12		2		1												15
9G15	5																5
9G21					1												1
9G24					1												1
9G25					1												1
9G37	1																1
9G38	1																1
9G39					1												1
9G44			1		1												2
9G48					1												1
9G51	6				4												10
Total	106	3	6	8	52												185

Screw Nails

Description

A screw nail is a fastening consisting of a relatively slender rigid piece of metal combining features of both the nail and the wood screw. It is intended to be driven in, as a nail, but is provided with a form of thread and a head to which a tool can be applied to produce a rotary motion so that to be removed it has to be turned as a wood screw. In total, such an object has the advantage of speed in being driven in but combines it with a holding power approaching that of a screw.

The term should not be confused with other applications which have been made of it. It refers neither to a wood screw nor a nail although some hardware catalogues have occasionally drawn such parallels.

The significance of screw nails cannot be discussed from this site since they are represented only by one specimen in the collection.

Variations

Variation 1 (Fig. 25j)

Manufacture: possibly wrought

Form:

Head: flat; circular; countersunk; partially slotted (slot is a linear depression on the upper surface of the head which does not extend to the head edge)

Shank: circular under head becoming fluted squared; non taper; squared portion has been given a twist to produce effect of a thread although it differs from a normal thread in being composed of four ridges rather than one; sharp point at extreme end

Distribution

The presence of only one specimen serves to indicate the existence of a form but does not constitute a basis for any discussion of distribution (Table 35).

Table 35	Screw Nail Distribution - 9G																	
Variation / Provenience	1																	Total
9GL4	1																	1
Total	1																	1

Timber Anchors

Description

In building construction, an anchor can be considered as a device for securing or fastening one part to another, differing from the screw, nail, and bolt in the manner in which such a fastening is achieved. Inclusion of the term timber further designates that a wooden element is the part being fastened or secured to the building.

A timber anchor can be secured to a building in one of two ways; either one end is driven in, in a manner similar to a nail, or it is set into a mortared wall, such as of brick or stone, and held in place by the mortaring. When driven, it differs from the nail in being driven through or into only one of the elements of a connection with the other element attached in a different manner. Although a driven anchor could also be attached on a brick or stone wall, such an identification must rely on information from the context or possibly the presence of mortar on the excavated object. Such information does not exist for any of the specimens considered here.

The wood being fastened can be attached in two ways; either it is provided with a prepared hole fitted over the shank of the anchor and held in place by some means or it is held by an additional fastening, through a hole in the end of the anchor, passing into the wood. The latter have also been designated as a "hold fast" (E.H. Knight 1876: 1112).

Although other types of manufacture may be possible, all items from the site are hand forged. Both driven and set variations are represented.

Variations

Variation 1 (Fig. 47a)

Manufacture: wrought

Form: A rectangular bar bent into an "L" shape; similar devices have been recorded from Louisbourg (Dunton 1972) and are known from other sites

Long Arm: tapered; chisel point, occasionally approaching a flat point; on the inner surface, at the upper end, there may be a groove paralleling the long axis; purpose of this groove is not known although it may be a consequence of manufacture; sides have been pinched at the upper end at the bend, possibly also as a consequence of manufacture

Short Arm: slight taper on upper surface; bevel at terminal edge; hole toward terminal end; hole countersunk on upper surface

Use: The long arm would be driven part way with a piece of wood fitted under the short arm and held in place by a fastening through the hole in the short arm; specific applications cannot be suggested although similar devices have been used to hold door and window frames in place.

Variation 2 (Fig. 47b)

Manufacture: wrought

Form: A squared bar with a head on one end

Head: formed by splitting end of bar followed by spreading the two halves in opposite directions to the point where they are at a right angle to the shank and 180 degrees to each other, resulting in a "T" head

Shank: bevelled edges; linear hole near end opposite to head

Use: In use, a lynch pin would be fitted through the hole in the end to hold the timber in place; this would be assisted by a washer fitted on the end of the shank and placed between timber and lynch pin; it is likely that, in use, the head end would be set into a mortared wall with a timber fitted over the other end and held in place by the washer and lynch pin; use of a lynch pin would allow easier removal of the timber although it is not known whether this justifies the form of the object; specific applications cannot be suggested.

Variation 3 (Fig. 47c)

Manufacture: wrought

Form: Similar to variation 2 except for termination of shank

Shank: end has been altered to a circular cross section and threaded for use with a nut

Use: Application could be similar to variation 2 except for the use of a nut which would possibly make the connection more permanent; no specific applications can be suggested.

Variation 4 (Fig. 47d)

Manufacture: wrought

Form: A circular bar with a head on one end

Head: flat; circular; countersunk

Shank: linear hole in end opposite to head; all specimens provided with a circular flat washer and a triangular lynch pin

Use: This variation has been included here because of a similarity with variations 2 and 3; however, the form of the head does not allow it to be set into a wall nor does the other end allow it to be driven; it may have been inserted through prepared holes in several layers of material although specific applications cannot be suggested.

Distribution

Virtually all specimens appear in 9G3 (Table 36). The remainder are from the general provenience for the site, 9G51, and, consequently, it is possible that they also originated in the same operation. Variations 2, 3, and 4, assuming that their function has been identified correctly, suggest a type of construction unique to this building

although it is still not possible to identify the specific nature of such construction. An alternative could be that they reflect a unique use of the building. The general absence of variation 1 is somewhat of a mystery since similar variations are known to occur in various sites throughout Canada during the time period of Coteau du Lac.

47 Timber Anchors: a, variation 1 (9G3A3-61); b, variation 2 (9G3A4-64): c, variation 3 (9G3C3-4); d, variation 4 (9G3C3-5). (NHSS RA-703 B)

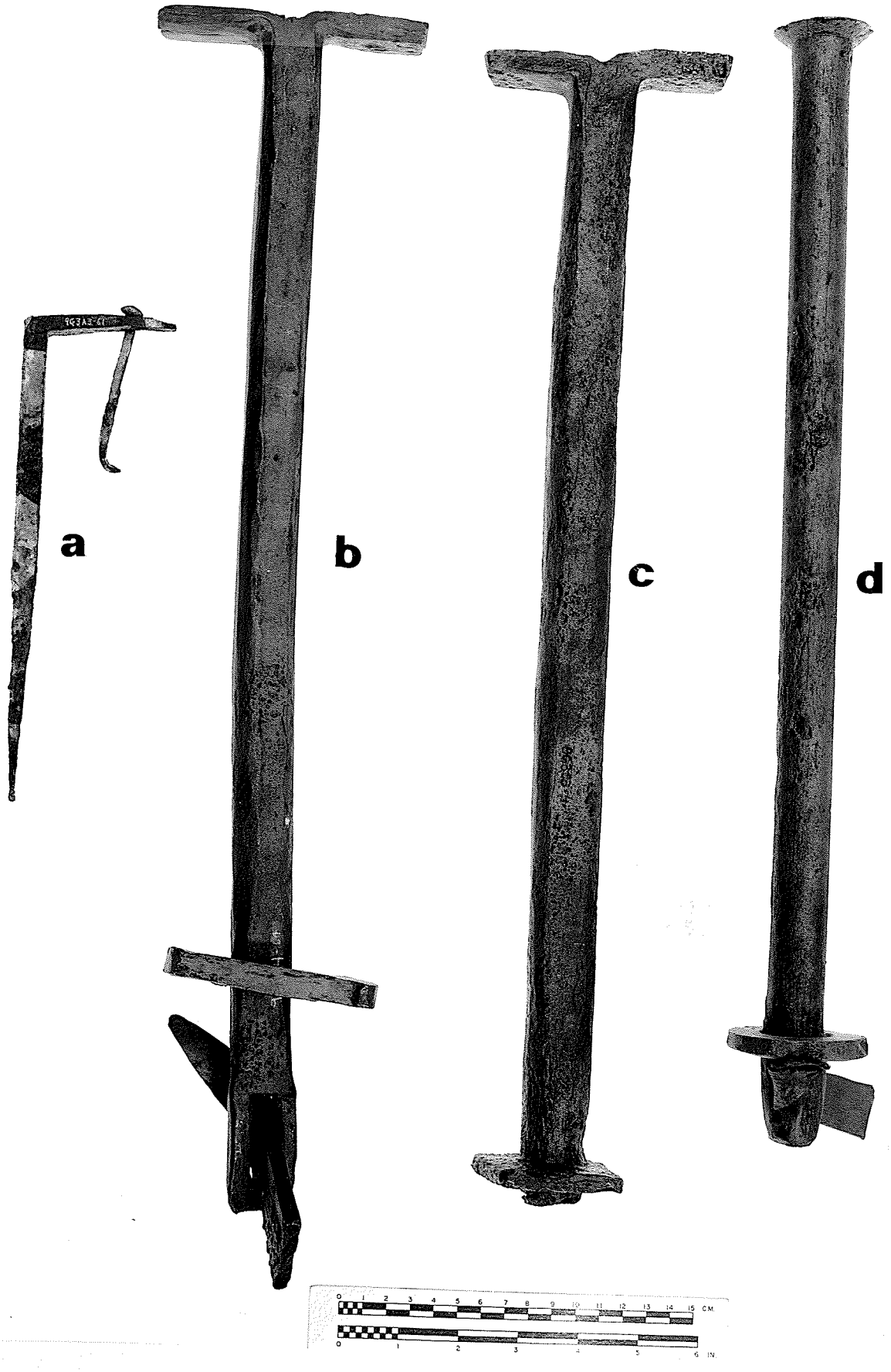

a
b
c
d
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 CM.
0 1 2 3 4 5 6 IN.

Table 36	Timber Anchor Distribution - 9G																
Variation / Provenience	1	2	3	4													Total
9G3	7	4	1	3													15
9G51	1																1
Total	8	4	1	3													16

Miscellaneous Hardware

Hooks

Description

A hook consists of a curved bar of metal for catching or suspending an object. As such, they can have application on a building but also for an extensive range beyond. Only one form of hook has been considered here and this one only because its form indicates it was driven into wood and thus many have been associated with a building. However, this could also be an item related to the use of the building rather than its construction.

Variations

Variation 1 (Fig. 26h)

Manufacture: wrought

Form: A circular bar bent into a hook at one end with the other end squared and tapered on two sides and bent at right angles to the hook for attachment; chisel point

Use: Presumably driven into wood.

Distribution

Only two specimens are present, both from the same area and possibly from the same building (Table 37). This situation may indicate a similar use although it is still not possible to suggest what that may have been.

Table 37	Hook Distribution - 9G																	
Variation / Provenience	1																	Total
9G4	1																	1
9G32	1																	1
Total	2																	2

Sheeting

Description

The term is a general one used to designate thin, relatively large pieces of metal, which may have been used at some point in a building. Identification as part of building hardware is based on the presence of holes for fastenings, occasionally with a nail still in place. Variations are designated in terms of material or use rather than being numbered.

Variations

Copper

Use: A number of large rectangular sheets are from a provenience identified as a door for a powder magazine.

Iron

Use: Possibly also used as roof sheeting although the folded edges are not present here.

Roof

Form: Iron sheeting with some of the edges doubled over and occasionally with such edges interlocked with those of another piece; also contains some fastening holes and nails

Use: Observation of existing buildings strongly suggest use of such sheeting for roofing with nails used for fastening; nails would be situated at the fold along the edge and concealed within it; other applications are possible but not known at present.

Distribution

Although the structural report for the site indicates an extensive use of iron sheeting as a roofing material the situation is not reflected in the artifact collection (Table 38). Only one operation (9G3) provides roof sheeting in a sufficient amount to suggest the conclusion that the building was possibly roofed with the material. For the remainder, little can be said since its form is too general, except for the large sections of copper sheeting in 9G3A5 (Fig. 49) which are known to have served as surfacing for a powder magazine door.

Table 38	Sheeting Distribution - 9G																	
Variation / Provenience	Roof	Iron	Copper															Total
9G3	M		5															M & 5
9G4	M	P																M
9G6	P																	P
9G15	P		1															P & 1
Total	M	P	6															M & 6

Chapter 4

THE EXCAVATIONS AND THEIR ARTIFACTS

Introduction

The site was excavated according to the guidelines of the National Historic Sites Service excavation manual (Swannack 1971). In brief this involves a breakdown into five levels of horizontal and vertical control, two levels for the designation of the site and three for the excavation units within each site. Each province is given a letter designation and each site within a province is given a number which is written preceding the letter of the province; thus Coteau du Lac is site 9G. The three levels within a site are, in descending order, operations, suboperations and lots and are designated by a number, a letter and another number. The excavation of a building is often done within the limits of a single operation and for present purposes discussions will be primarily at the level of the operation rather than any of its smaller units.

The artifacts considered here are from a total of 50 operations. The remaining operations contained no building hardware. One operation, 9G1, is discussed only in terms of its nails. It was felt that 9G1, representing the canal and associated features, probably contained relatively large quantities of items of refuse rather than items related to

construction in the immediate area. The nails were included for more complete statistics for the tabulation of nails by type of manufacture, they were not divided into specific variations or measured.

Of the total operations, less than half represent the area of an actual building, that is a structure which encloses a space with walls and a roof. The remainder are either areas of construction, resulting in structures other than a building, or general test excavations throughout the site. Nineteen operations represent actual buildings, two are associated with buildings, one represents a building as well as other forms of construction, 18 represent some form of structure other than a building, two are associated with roadways, seven are test areas probably not associated with any construction and one is a general provenience for artifacts whose specific provenience is not known or has been lost at some point in the process of multiple handling.

The operations have been assigned to one of the four construction periods or placed into an indeterminate category (Table 39). For some buildings the original construction date is not known definitely because of incomplete documentation. In such cases the building has been assigned to the earliest period possible for it, which is usually period I on the basis of the building having been recorded as standing during the early part of period II.

In the discussions which follow the operations are presented within the building, structural feature or other

unit which they represent in terms of the artifacts each has provided. Comparisons are also made with other operations or the site in general when possible or necessary. Summaries of any of the construction histories are derived from the historical and structural report for the site (Folan and Ingram 1972).

Tabulation of Artifact Descriptions

The discussion of the individual buildings, structures, or groupings of operations are followed in each case by a series of tables describing the artifacts from the relevant operations. The descriptions have been put into tables as a matter of economy.

The general format of all tables is the same with slight differences in detail for each artifact type. Each table provides space for information on the type and variation of an item, its provenience, material and completeness. The variation is listed either as a number or as "Ind" for indeterminate. Material is listed as iron, brass or copper. Completeness is listed as one of four possible choices: complete is used when all of an object remains, incomplete where at least two-thirds remains, partial where one-third to two-thirds remains and fragment where less than one-third remains.

As a matter of economy of space in the tabulated descriptions, a variety of abbreviations have been used. All measurements are in inches although the designation

"in." has been omitted. For the provenience the designation of site has been omitted. The designations of completeness are given as "comp", "incomp", "par" and "frag". When the term part occurs under completeness it indicates that an object has been recognized as a complete part of a more complex object. When an object is not complete it is not possible to obtain full measurements for some of the dimensions. Rather than leave out the dimension entirely, the remaining measurement has been recorded followed by the designation "(R)". For hinges when only one side is present, horizontal measurements have been taken to the midline, which is the line about which the hinge would pivot and the entry is followed by the designation "(tml)". When a dimension category does not apply to a certain variation the entry in that column is "NA" for not applicable. When a dimension could not be observed because of distortion or fragmentation the designation "Ind", for indeterminate, is used and when a dimension was not recorded when it should have been the designation is "-". For the countersinking of holes the location is recorded as either front or back but when it is both front and back this is abbreviated to F&B. In recording the quantity of iron or roof sheeting the designations "P" for present and "M" for multiple have been used rather than actual counts. An actual count would be of no value since it would increase with each time that the

material was handled. Absence of a dimension is designated as "Abs".

48 Plan of the Fort at Coteau du Lac. (9G-66-101-1)

Table 39: Identification and Construction Period of Operations

Operation	Construction Period I	II	III	IV	Indeterminate
9G1-Canal and Associated Features	X			X	
9G2-Scarp Wall					X
9G3-Octagonal Blockhouse		X			
9G4-Commanding Officer's Quarters		X			
9G5-South Storehouse, Gunshed	X				
9G6-North Storehouse	X				
9G7-North Blockhouse	X				
9G8-South Blockhouse	X				
9G9-Hospital	X				
9G10-Cloverleaf Bastion		X			
9G11-Hospital, Master Carpenter's Quarters	X				
9G12-Gun Platform		X			
9G13-Barracks, Carpenter's Shop, Stables	X				
9G14-Powder Magazine		X			
9G15-Stone Barracks		X			
9G17-Commissariat Officer's Quarters, Church		X			
9G18-Temporary Bakehouse and Canteen	X				
9G19-Temporary Bakehouse and Canteen	X				
9G20-Bridge Abutments	X				
9G21-Guard House		X			
9G22-Bakehouse		X			

Table 39 (cont.)

9G23-Barracks Master's Quarters	X		
9G24-Cookhouse	X		
9G25-Barracks Store		X	
9G26-Retaining Wall near 9G7			X
9G27-Miscellaneous Test Area			X
9G28-Maypole			X
9G29-Miscellaneous Test Area			X
9G30-Miscellaneous Test Area			X
9G31-Palisade			X
9G32-Commanding Officer's Quarters	X		
9G33-Miscellaneous Test Area			X
9G34-Miscellaneous Test Area			X
9G37-Miscellaneous Test Area			X
9G38-Road south of Ramp and in Vicinity of 9G15			X
9G39-Road east and west of Canal			X
9G40-Barracks Master's Quarters	X		
9G41-Miscellaneous Test Area			X
9G42-Gun Platform	X		
9G43-Embrasure			X
9G44-Cloverleaf Bastion	X		
9G45-Cloverleaf Bastion	X		
9G47-Cloverleaf Bastion	X		
9G48-Cloverleaf Bastion	X		
9G51-General Provenience			X

Table 39 (cont.)

9G52-Miscellaneous Test Area		X
9G54-Gun Platform	X	
9G55-Gun Platform	X	
9G56-Gun Platform	X	
9G57-Cloverleaf Bastion	X	

The Excavations

The Canal and Associated Features (9G1; Fig. 48: structure 1) Construction of the canal had been largely completed by the fall of 1780 and for the next 60 years it served the transportation needs of the area until replaced by improved facilities elsewhere in 1840. During that time several modifications and repairs were undertaken to provide for larger boats and maintain it in a usable condition. During the period 1800-03 it was enlarged and repairs were made numerous times, in 1818, 1826, 1831, and 1833. In 1866 a mill was erected over the canal and used into the 1890's.

Only the nails have been considered for discussion. In general, these correspond with the majority of operations and the site in general and herein lies somewhat of a problem or question. The area is one of few in which construction took place during the second half of the 19th century and yet the frequency of cut and wire nails (16.8 per cent and 0.8 per cent; Table 29) does not reflect such activity. Even when lots are considered individually, wrought nails always predominate. It should be considered likely that cut nails would be used as the major type during construction of the mill and yet the artifact collection suggests the opposite. Also since the British military was not responsible for construction of the mill a greater frequency of cut nails could have been expected. An explanation of the situation could be that the mill was

removed as a unit, consequently providing little opportunity for deposition of refuse. The absence of wire nails is less difficult to justify since it is quite possible that these were not in general use during any part of the mill construction and would only have been used in repairs during the latter part of its history.

Scarp Wall (9G2; Fig. 48: structure 2)

The absence of a building in the area and the possibility of only minor construction activity is reflected by the small quantity of artifacts, consisting of a hinge (Table 40), a staple (Table 41) and 154 nails and fragments (Table 42). The artifacts would presumably be derived from construction in the vicinity and the nails are consistent with the nails from the site in being predominantly wrought (85.6 per cent; Table 29).

TABLE 40

HINGE - 9G2

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	MINIMUM WIDTH	THICKNESS	NUMBER PER SIDE AND DIAMETER OF FASTENING HOLES	COUNTERSINKING	HOLE ARRANGEMENT	T PLATE: LENGTH	MEDIAN: WIDTH	JOINT: LENGTH	SOCKET: INSIDE DIAMETER	QUANTITY
1	2C1-61	Iron	Incomp	2 5/8	15/16 (tml)	NA	1/8	3, 1/4	Front	linear	NA	NA	NA	NA	1

TABLE 41

STAPLE - 9G2

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	INSIDE WIDTH	BAR: MAXIMUM CROSS SECTION	SHOULDER HEIGHT	PLATE: LENGTH	PLATE: WIDTH	PLATE: THICKNESS	QUANTITY
5	2B1-34	Iron	Comp	4 9/16	15/16	3/8	NA	NA	NA	NA	1

TABLE 42 NAIL DISTRIBUTION (Variation and Length) — 9G2

Length \ Variation	A1	A2	A4	A5	A6	A14	A15	A26	A31	A52	A63	A72	A78	A94	A96	A102	A105		
3/4																			
1																			
1/4		3		1				1											
1/2		1							1										
3/4		2		1				2	1										
2		2		1												1			
1/4		1																	
1/2		1	1	1				1											
3/4		2		1															
3		1	1																
1/4		1								1									
1/2		4	1	1															
3/4		4																	
4		1		1															
1/4		2	1	1															
1/2		1																	
3/4		1				1									1				
5		1		2															
1/4				2															
1/2		1		1															
3/4		1																	
6				1															
1/4				1															
1/2													1						
3/4																			
7																			
1/4																			
1/2																			
3/4																			
8																			
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate																			
TOTAL	35	34	6	14	26	1	1	4	2	1	1	2	1	5	1	1	1		

TABLE 42(cont.) NAIL DISTRIBUTION (Variation and Length) – 9G2

Length \ Variation	B1	B6	B8	D3	TOTAL
3/4					
1					
1/4					5
1/2					1
3/4		1			6
2					5
1/4					2
1/2					1
3/4					3
3				1	3
1/4		2			2
1/2		3			1
3/4					2
4					2
1/4		1			1
1/2		1			2
3/4					6
5					9
1/4					1
1/2					3
3/4					1
6					1
1/4					2
1/2					3
3/4					3
7					3
1/4					
1/2					2
3/4					2
8					1
1/4					
1/2					
3/4					
9					
1/4					
1/2					
3/4					
10					
1/4					
1/2					
3/4					
11					
1/4					
1/2					
3/4					
Indeterminate					
TOTAL	1	8	8	1	1

Octagonal Blockhouse (9G3; Fig. 48: structure 3) Construction was apparently begun in 1813 and largely completed in the early summer of 1814. In 1815, its upper story was converted for use as a hospital. During its first years, the upper floor had also been constructed to be convertible to a gun platform, for a 24 pounder cannon, if a need for it should arise. By the 1830's it was in ruins and in 1837 it was ordered to be destroyed. Since it was found to be unsafe to be dismantled, it was burned.

For a building destroyed by fire it is surprising that so little hardware remains (Tables 43-59). This situation becomes even more obvious when comparisons are made with the Commanding Officer's Quarters, also destroyed by fire. The absence of some types and the scarcity of others suggests that some salvaging had taken place either at the time of destruction or during the period of several years during which the building was unoccupied. Except for the copper clad door of the powder magazine (9G3A5; Figs. 49, 50; Table 53) with its brass door lock (variation 5; Table 44) and iron pintles (variation 9; Table 50), very little door hardware is present. No other locks are present and only one guide from a thumb latch. Other closure devices consist of a sliding bolt (Table 54) and three gate hooks (Table 47), none of which need be associated with a door. Ten hinges (Table 48) and six pintles (Table 50) are present, however, none of the hinges fit the pintles. Some of the hinges may

not be adequate for large doors although some of them probably are. The presence of screws on all of the hinges suggest that the doors were still hung when the building was burned. Of the 52 screws (Table 52), 38 are still associated with a specific hinge (Table 48).

The relatively large quantity of roof sheeting (Table 53) is in agreement with the presence of a sheet metal roof as recorded by Folan and Ingram. The sheeting had been fastened with wrought nails (variation A26) several of which remained in place.

This building is unique in being the only one providing pins (Table 49) and timber anchors (Table 57), suggesting a form of construction, including the use of heavier timbers, not found elsewhere on the site. The form of some of the timber anchors also suggest the use of stone into which the anchors could be set.

Nails are almost exclusively wrought (97.1 per cent; Table 29). The few cast nails are of the form associated with the copper sheeting of the powder magazine door and almost half are still in place in the sheeting (Fig. 49). The small quantity of cut nails is in keeping with the delay in their acceptance as a substitute for wrought ones. The building was destroyed before cut nails had come into widespread use on the site sometime after 1850. For the wrought nails there is a high frequency of variation A69, A72, and A78 (Table 59) approximately 16.6 per cent of the

countable wrought nails, and indicates an extensive use of heavy timbers requiring a more extensive use of long nails (variation A72 probably represents a head fragment of variation A69). The existence of an interior gun platform or a need for heavier fortification of a blockhouse are possible reasons for this situation.

49 Door to powder magazine (9G3A5), *in situ*, showing the copper sheeting, nails, and brass key escutcheon with pivoted cover plate. (NHSS 9G-93 M)



50 Door to powder magazine (9G3A5), ex situ, showing the copper sheeting, wood fragments, and brass door lock. (NHSS 9G-118 M)

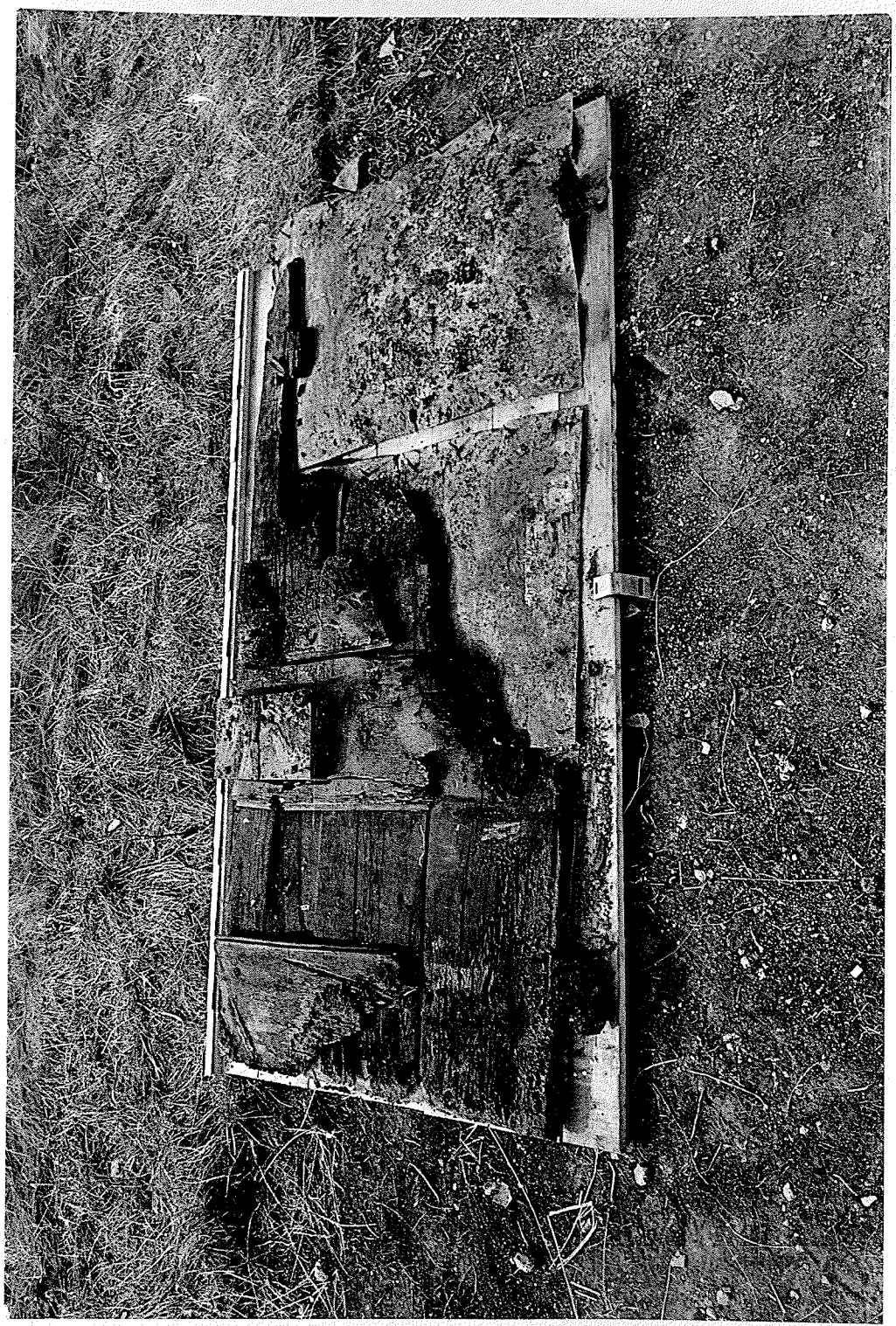


TABLE 43 — BRACKET - 9G3

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	MAXIMUM CROSS SECTION		QUANTITY
1	3C5-75	Iron	Incomp	7 (R)	7/16 sq.		1

TABLE 44 — DOOR LOCK - 9G3

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	HOUSING: LENGTH	HOUSING: MAXIMUM WIDTH	HOUSING: MINIMUM WIDTH	HOUSING: PLATE: THICKNESS		QUANTITY
5	3A5-	Brass	Comp	12	6 5/8	NA	1/8 - 3/16		1
	With five screws; two Variation 1, length 1 9/32"and three Variation 4, length 3 1/2"; all of brass.								

TABLE 45 — DOOR LOCK, KEY ESCUTCHEON - 9G3

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	THICKNESS	KEY HOLE: LENGTH	FASTENING HOLE: DIAMETER		QUANTITY
1	3A5-	Brass	Comp	3 1/2	2 9/16	7/64	2 3/8	3/16		1
	With oval, pivoted cover plate. Circumscribed broad arrow on both parts. One screw: Variation 3, length 7/8"									

TABLE 46 EYE - 9G3

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	EYE: INSIDE DIAMETER	THREAD: DIAMETER	WASHER: LENGTH AND WIDTH		QUANTITY
1	3C4-30	Iron	Comp	7 3/4	1 1/16	1 15/16	NA	2 11/16 sq.		1
	Broad arrow stamped on shank.									
3	3H1-106	Iron	Incomp	2 11/16	5/16 sq.	Ind.	NA	NA		1

TABLE 47 GATE HOOK - 9G3

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	HOOK: LENGTH	EYE: INSIDE DIAMETER		QUANTITY
1	3C3-48	Iron	Comp	8	3/8 x 1/4	1 7/8	-		1
	3C4-33	Iron	Comp	7 7/8	3/8 x 1/4	2 1/16	-		1
Ind	3H1-105	Iron	Incomp	Ind	11/32 x 3/8	Ind	--	Possible Variation 2.	1
	Swinging eye - eye Variation 3; length -.								

TABLE 48 | HINGE - 9G3

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	MINIMUM WIDTH	THICKNESS	NUMBER PER SIDE AND DIAMETER OF FASTENING HOLES	COUNTERSINKING	HOLE ARRANGEMENT	T PLATE: LENGTH	MEDIAN: WIDTH	JOINT: LENGTH	SOCKET: INSIDE DIAMETER	QUANTITY
1	3A3-60	Iron	Comp	3 3/16	2 5/8	NA	1/8	3, 5/16	F&B	Linear	NA	NA	NA	NA	1
	One fastening fragment in place, possibly a screw.														
	3A4-60	Iron	Comp	2 5/8	1 7/8	NA	1/8	3, 1/4	F&B	Linear	NA	NA	NA	NA	1
	Five screws in place; Variation 1; length 1 1/16".														
	3G1-43	Iron	Comp	2 9/16	2	NA	1/8	3, 1/4	F&B	-	NA	NA	NA	NA	2
	Six screws in place; Variation 1; length 1".														
	3G2-41	Iron	Comp	2 5/16	1 3/16	NA	1/8	3, 3/16	Front	-	NA	NA	NA	NA	1
	Five screws in place; Variation 1; length 1"														
	3G2-42	Iron	Comp	3 3/8	2 5/8	NA	3/16	3, 5/16	Front	-	NA	NA	NA	NA	1
	Three screws in place; Variation 1; length 1 1/4".														
	3G3-32	Iron	Comp	3 5/16	2 5/8	NA	1/8	3, 5/16	F&B	-	NA	NA	NA	NA	1
	Six screws in place; Variation 1; length 1 1/4".														
	3G3-33	Iron	Comp	2 9/16	1 15/16	NA	1/8	3, 5/16	F&B	-	NA	NA	NA	NA	1
	Six screws in place; Variation 1; length 1 1/4".														
	3G3-57	Iron	Comp	3 5/16	2 3/4	NA	3/16	3, 1/4	Front	-	NA	NA	NA	NA	1
	Four screws and one fragment in place; Variation 1; length 1 1/4".														
	3J1-60	Iron	Comp	3 1/4	2 3/4	NA	-	3, 5/16	F&B	-	NA	NA	NA	NA	1
	Three screws in place; Variation 1; length 1 3/16".														

TABLE 49 | PIN - 9G3

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	MAXIMUM CROSS SECTION		QUANTITY
1	3C3-6	Iron	Comp	7 1/2	1 1/8 sq.		1
	Stamped with a broad arrow.						
	3C3-7	Iron	Comp	8 3/4	1 1/16 sq.		1
	3C5-78	Iron	Comp	8 1/4	1 3/16 sq.		1
	3C5-79	Iron	Comp	6 3/8	1 1/8 sq.		1
	Stamped with a broad arrow.						
2	3E2-47	Iron	Incomp	15 5/8	11/16		1

TABLE 50 | PINTLE - 9G3

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	SHANK			PIN		WING:	NUMBER AND DIAMETER OF FASTENING HOLES	REINFORCING ARM		QUANTITY
				LENGTH	MAXIMUM CROSS SECTION	WIDTH AT SHOULDER	LENGTH	MAXIMUM DIAMETER	MAXIMUM WIDTH		LENGTH	MAXIMUM CROSS SECTION	
3	3G3-58	Iron	Comp	3 5/8	3/8 sq.	NA	1 1/4	5/16	NA	NA	NA	NA	1
6	3A4-61	Iron	Comp	3 5/8	1/4 sq.	NA	1	1/4	NA	NA	NA	NA	1
8	3F1-47	Iron	Comp	4 1/8	5/8 x 5/16	NA	1 1/4	1/2	NA	NA	NA	NA	1
	End of pin is bevelled												
	3F1-61	Iron	Comp	4 1/2	9/16 x 1/4	NA	1 15/16	1/2	NA	NA	NA	NA	1
	End of pin is bevelled												
9	3A5	Iron	Comp	8 1/2	1 1/8 x 1	NA	2 15/16	1 1/8	NA	NA	NA	NA	1
	Shank has been barbed on all four edges												
	3A5	Iron	Comp	7 3/4	1 1/8 x 1	NA	2 1/2	1	NA	NA	NA	NA	1
	Shank has been barbed on at least two edges; considerable wear of shank around pin												

TABLE 51 — RIVET - 9G3

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	MAXIMUM CROSS SECTION	HEAD: DIAMETER	WASHER: LENGTH AND WIDTH		QUANTITY
1	3C4-31	Iron	Comp	7 7/8	9/16	1 1/16	1 11/16 sq.		1
	Stamped with a broad arrow on the washer and on the top of the head.								

TABLE 52 — SCREW - 9G3

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY	VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY
1	3A3-51	Iron	Comp	1 1/4	2		3G3-56	Iron	Comp	1 3/16	1
	3A4-59	Iron	Comp	-	1	2	3B1-158	Iron	Comp	Ind	1
	3G1-41	Iron	Comp	1	1		3F1-128	Iron	Comp	2 3/16	1

TABLE 53				SHEETING - 9G3		
VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	MAXIMUM REMAINING DIMENSION		QUANTITY
Roof	3A2-35	Iron	Frag	-		M
	One wrought nail in place: Variation A29, length 1 3/8".					
	3A3-59	Iron	Frag	-		P
	Three wrought nails in place: Variation A26, length 1 1/2"; some paint also adhering.					
	3C1-10	Iron	Frag	-		P
	3E1-61	Iron	Frag	-		P
	3G1-42	Iron	Frag	-		P
	One wrought nail in place: Variation A31, length 1 5/16".					
	3G2-43	Iron	Frag	-		M
	Twenty one wrought nails in place: Variation A31, length 1 1/2".					
	3G4-52	Iron	Frag	-		P
	3G5-18	Iron	Frag	-		P

TABLE 53 (cont.) SHEETING - 9G3

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	MAXIMUM REMAINING DIMENSION		QUANTITY
	3H1-103	Iron	Frag	-		P
Copper	3A1-31	NA	Frag	-		1
	With one square hole and impression of a circular fastening head (diameter 11/16").					
	3A5	NA	Frag	32 x 24	Three complete panels and a fragment from a door; some plank fragments adhering; numerous nails and nail holes present; nail Variation D10 and D11, length 1 1/4" to 1 1/2".	4

TABLE 54 SLIDING BOLT - 9G3

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	BOLT				PLATE				QUANTITY
				LENGTH	MAXIMUM CROSS SECTION	HANDLE		LENGTH	WIDTH	THICKNESS	NUMBER AND DIAMETER OF FASTENING HOLES	
						DIAMETER	HEIGHT					
1	3E2-49	Iron	Comp	8 3/8	7/16 x 5/16	1 1/16	-	5 3/16	1 7/16	1/16	4, 3/16	1

TABLE 55 STAPLE - 9G3

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	INSIDE WIDTH	BAR: MAXIMUM CROSS SECTION	SHOULDER HEIGHT	PLATE LENGTH	PLATE WIDTH	PLATE THICKNESS	QUANTITY
4	3B1-160	Iron	Comp	4 3/8	15/16	5/16 x 1/4	NA	NA	NA	NA	1
	3C3-49	Iron	Comp	1 15/16	9/16	1/4 sq.	NA	NA	NA	NA	1
	3E1-68	Iron	Comp	2 5/8	1	3/8 x 5/16	NA	NA	NA	NA	1
5	3C2-26	Iron	Comp	3 3/8	11/16	5/15 x 1/4	NA	NA	NA	NA	1
	3C3-50	Iron	Comp	3 1/2	3/4	1/4 x 3/16	NA	NA	NA	NA	1
8	3H1-104	Iron	Comp	3 9/16	2 1/2	11/16 x 1/4	NA	NA	NA	NA	1
Ind	3B1-159	Iron	Incomp	3 1/4 (R)	1	5/16 x 1/4	NA	NA	NA	NA	1

Possible Variation 4 or 5.

TABLE 56 THUMB LATCH, GUIDE - 903

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	THICKNESS	STAPLE: INSIDE WIDTH	STAPLE: INSIDE HEIGHT	HOLE: DIAMETER	COUNTERSINKING	QUANTITY
2	3H1-102	Iron	Incomp	Ind	3/4	3/16	1 7/8	5/16	Ind	Ind	1

Some black paint adhering.

TABLE 57 TIMBER ANCHOR - 9G3

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	MAXIMUM CROSS SECTION	SHORT ARM		HEAD: LENGTH AND WIDTH or DIAMETER	HOLE: LENGTH AND WIDTH or DIAMETER	NUT: LENGTH AND WIDTH	QUANTITY
						LENGTH	MAXIMUM CROSS SECTION				
1	3A1-61	Iron	Comp	8 1/8	5/8 x 3/8	2 1/2	9/16 x 5/16	NA	-	NA	1
	Wrought nail in place; Variation A2, length 3 1/4".										
	3C3-51	Iron	Incomp	-	1/2 x 5/16	2 1/2	9/16 x 1/4	NA	-	NA	1
	3C5-76	Iron	Incomp	-	5/8 x 7/16	2 1/2	5/8 x 1/4	NA	-	NA	1
	3G4-49	Iron	Comp	7 3/16	5/8 x 3/8	2 7/16	13/16 x 3/16	NA	-	NA	1
	3G4-50	Iron	Frag	Ind	9/16 x 3/8	-	5/8 x 1/4	NA	-	NA	1
	Fastening fragment in place; head possibly flat, circular.										
	3G4-51	Iron	Frag	Ind	5/8 x 3/8	2 1/2	11/16 x 3/8	NA	-	NA	1
	Fastening fragment in place; head possibly flat, circular.										
	3G5-19	Iron	Comp	8 7/8	5/8 x 3/8	2 1/2	5/8 x 1/4	NA	-	NA	1
	Wrought nail fragment in place; Variation A6.										
2	3A4-64	Iron	Comp	19 7/8	1 sq.	NA	NA	4 1/2 x 7/8	1 3/8 x 3/8	NA	1
	WASHER: Variation 7; 3 1/2" x 2 1/8" x 1/2". LYNCH PIN: Variation 1; 5 3/4" x 1 3/16".										

TABLE 57 (cont.) TIMBER ANCHOR - 9G3

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	MAXIMUM CROSS SECTION	SHORT ARM LENGTH	SHORT ARM MAXIMUM CROSS SECTION	HEAD: LENGTH AND WIDTH or DIAMETER	HOLE: LENGTH AND WIDTH or DIAMETER	NUT: LENGTH AND WIDTH	QUANTITY
	3A4-65	Iron	Incomp	20 5/8 (R)	7/8 sq.	NA	NA	Ind	1 1/4 x 5/16	NA	1
	WASHER: Variation 7; 5" x 1 11/16" x 1/2". LYNCH PIN: Variation 1; 6" x 1 1/8".										
	3C3-3	Iron	Comp	20 5/8	7/8 sq.	NA	NA	4 x 5/8	1 x 3/8	NA	2
	WASHER: Variation 7; 3 1/8" x 2 5/8" x 3/82. LYNCH PIN: Variation 1; 5 1/2" x 1".										
3	3C3-4	Iron	Comp	19 3/16	1 1/16 sq.	NA	NA	4 x 15/16	NA	2 1/16 sq.	1
	Edges of shank are bevelled.										
4	3C3-5	Iron	Comp	18 5/8	1	NA	NA	1 5/8	1 3/8 x 3/16	NA	1
	WASHER: Variation 3; 2 1/4" x 3/8". LYNCH PIN: Variation 1; width 15/16". Broad arrow on head and washer.										
	3C4-32	Iron	Comp	19 1/8	15/16	NA	NA	1 5/8	1 17/32 x 7/32	NA	1
	WASHER: Variation 3; 2 1/2" x 3/8". LYNCH PIN: Variation 1; width 15/16". Broad arrow on head and washer.										
	3E2-48	Iron	Comp	18 3/4	15/16	NA	NA	1 3/8	1 1/4 x 3/16	NA	1
	WASHER: Variation 3; 2 7/16" x 7/16". LYNCH PIN: Variation 1; width 1". Broad arrow on head and washer.										

TABLE 58

WASHER - 9C3

7	VARIATION
3A4-62	PROVENIENCE
Iron	MATERIAL
Comp	COMPLETENESS
3 1/4 x 2	LENGTH AND WIDTH or DIAMETER
5/16	THICKNESS
1 1/4	HOLE: DIAMETER or LENGTH AND WIDTH
NA	FASTENING HOLE: DIAMETER
1	QUANTITY

TABLE 59 NAIL DISTRIBUTION (Variation and Length) – 9G3

Length \ Variation	A1	A2	A3	A4	A5	A6	A11	A12	A13	A14	A15	A16	A18	A20	A21	A23	A24	A25	A26
3/4																			
1																			2
1/4				1															5
				1	1														4
1/2		2																	8
		2																	2
3/4		1																	1
		3																	1
2		3		1															
		2		1															3
1/4		5		1	1		1												
				1															
1/2				3					1	1					1				4
		4														1			
3/4		5			1				1						1		1		
		3					1												
3		12	1	4	1		1					2			2		1		
		21		2			3					1			1				
1/4		29	1	3	1		2		1			1			3				
		46	1	6	1		7		1			3			4	1			
1/2		73	7	9	1		9	1	4			5	1		17	2			1
		78	2	9	1		16	1	1			6	1		14	2			
3/4		60		2	1		9		2			1			4		1		
		25		2	2		2		1						3				
4		14	1	1	1		1					2							
		13	6									1					1		
1/4		18	10	2	2		1	1											
		8	8	4	2		1												
1/2		11	21	1			1	1								1			
		4	19	3	1			1											
3/4		6	31	1															
		3	35	1															
5		7	6	2															
		8		2															
1/4		7	1	1								1							
		15	2	2											1				1
1/2		15	1	2															
		7		4															
3/4		5	1																
		2																	
6		1																	
1/4				1															
1/2																			
3/4																			
7																			
1/4			1																
1/2																			
3/4																			
8																			
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate		1			1														
TOTAL	244	519	155	73	18	406	55	5	12	1	22	23	2	8	51	7	4	9	32

TABLE 59(cont.) NAIL DISTRIBUTION (Variation and Length) – 963

Length \ Variation	A28	A29	A30	A31	A33	A34	A36	A37	A39	A40	A41	A42	A56	A59	A60	A63	A64	A69	A70
3/4																			
1				1					2			1							
1/4				10		2	6	1	6										
1/2	1			23			8		10			1					1		
3/4	1			33			6		5					1					
2				1			1		1										
1/4				1			1												
1/2																			
3/4																			
3		1																	
1/4					1		1												
1/2								1											
3/4								1		1				1					
4																			
1/4										1									
1/2																			
3/4																			
5																			
1/4													1						
1/2														1					
3/4																			
6																			
1/4															1				
1/2															1				
3/4																		3	
7																		11	
1/4																		9	2
1/2																		25	1
3/4																		22	1
8																		36	1
1/4																		15	
1/2																		13	
3/4																		21	1
9																		22	
1/4																		23	
1/2																		24	1
3/4																		12	
10																		7	
1/4																		2	
1/2																			
3/4																			
11																		1	
1/4																		1	
1/2																		1	
3/4																		2	
Indeterminate																			
TOTAL	2	1	9	69	1	2	23	3	24	2	3	2	1	3	2	2	1	251	7

TABLE 59 (cont.) NAIL DISTRIBUTION (Variation and Length) – 963

Length \ Variation	A72	A73	A79	A87	A90	A94	A95	A96	A97	A114	A117	A118	B1	B2	B6	B8	B10	B11	B16
3/4																			
1																			
1/4																			
1/2															3				
3/4															2				
2																			
1/4														1					
1/2																			
3/4																			
3															1		1		
1/4															1				
1/2										1									
3/4															1				
4																			
1/4																			
1/2			1				3												
3/4		1	2				5	2											
5		2	2				4	1											
1/4		1	1				2	1											
1/2																			
3/4							1												
6		2					1	1											
1/4		1					2												
1/2		3					2	1											
3/4		1	1				4												
7		2	1	1			4												
1/4		3					2												
1/2		5																	
3/4		2		1															
8		1																	
1/4		1																	
1/2		1																	
3/4		4																	
9		2																	
1/4		1																	
1/2		1																	
3/4		1																	
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate										3	1								
TOTAL	33	37	7	2	2	2	30	6	2	4	1	3	1	1	8	3	1	1	2

TABLE 59(cont.) NAIL DISTRIBUTION (Variation and Length) – 9G3

Length \ Variation	D10	D11	TOTAL
3/4			
1	6		1
1/4	16		11
1/2	6		44
3/4	3		56
2	1		62
1/4			12
1/2			4
3/4			5
3			4
1/4			6
1/2			8
3/4			2
4			9
1/4			6
1/2			9
3/4			4
5			27
1/4			29
1/2			41
3/4			73
6			130
1/4			135
1/2			80
3/4			35
7			20
1/4			21
1/2			35
3/4			24
8			41
1/4			37
1/2			43
3/4			41
9			18
1/4			12
1/2			12
3/4			22
10			18
1/4			11
1/2			7
3/4			3
11			4
1/4			4
1/2			7
3/4			5
			5
			6
			12
			11
			29
			26
			43
			17
			14
			23
			27
			22
			26
			13
			8
			2
			1
			1
			1
			1
			3
			3
			1
Indeterminate			6
TOTAL	32	10	

Commanding Officer's Quarters (9G4 and 9G32; Fig. 48: structure 4)

Of the two operations, the former represents the area of the actual building whereas the latter may represent an associated building but is assumed to be refuse from the other. Although the building seems to have been erected during period II, it may be a survival from the earlier period. Folan and Ingram's preference is for construction during the early part of period II. By 1816 one wing had disappeared and another built and the building stood in this form and was occupied until destroyed by fire in 1870. Repairs are mentioned only for the year 1819 although others could be anticipated during the next fifty years of occupation.

The total collection of artifacts for these operations (Tables 60-95), when compared with the Octagonal Blockhouse, is a reflection of the difference in fate of the two buildings involved. Although both were burned, one intentionally after years of vacancy the other while still occupied. Consequently a much larger group of artifacts was found in the latter. Apparently few or no items were removed after the fire.

A total of three door locks (Table 63) and four door lock parts (Tables 66, 67) are present, representing at least six different locks. The keepers (Table 64) and key escutcheons (Table 65) could have been associated with any

one of them. There are at least two door locks of variation 1 which may represent outside doors where both a latch bolt and lock bolt would be an advantage. At least six thumb latches are also present (Tables 81-85, 94), possibly associated with any of the door locks, except variation 1, or used separately. For the door lock in 9G4D3 (Table 63), a key was found in place but it could not have operated the bolt.

A total of 34 hinges (Tables 71, 89) and 15 pintles (Tables 75, 92) are present. Many of the cast hinge variations still have screws attached, again indicating the closures were still hung when the building burned. Of the 63 screws (Table 76), 32 are still attached to a hinge (Table 71).

Wrought nails still predominate (85.0 per cent; Table 29) although a relatively large quantity of cut and wire nails are also present. The high proportion of nails with lengths around 2 inches, primarily variation A2 (Table 86), suggest shingling or lath on the building. The quantity of cut nails suggest some alteration or repair during later years. The quantity of short cut nails, lengths around 1 1/2 inches (Table 86), suggests some repairs to the roof involving reshingling. The quantity of wire nails (100; Table 29) is probably intrusive since their extensive use in building is presumed to post-date destruction of the building.

TABLE 60 BOLT - 9G4

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	THREAD: DIAMETER		QUANTITY
1	4A18-108	Iron	Comp	7 7/8	5/8 sq.	11/16		1
	4B1-35	Iron	Comp	3 1/8	5/16 sq.	1/4		1
	NUT: Variation 1; 3/4" x 11/16" x 3/16".							
2	4B1-36	Iron	Comp	3 7/16	1/2	1/2		1
3	4C8-115	Iron	Comp	5 1/4	7/16	7/16		1
	NUT: Variation 1; 15/16 " x 13/16 " x 3/8".							
4	4D4-214	Iron	Comp	2 15/16	3/8	3/8		1
22	4A3-95	Iron	Incomp	6 1/2 (R)	3/8	3/8		1
	WASHER: Variation -; diameter 7/8".							
	4C3-36	Iron	Frag	Ind	3/8	Ind		1
	WASHER: Variation -; diameter 1".							

TABLE 61 NUT - 9G4

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH AND WIDTH or DIAMETER	THICKNESS	HOLE: DIAMETER		QUANTITY
1	4B3-224	Iron	Comp	1 3/32 x 1 1/16	11/16	15/32		1
	4B3-225	Iron	Comp	7/8 x 27/32	1/2	3/8		1
	4C7-158	Iron	Comp	19/32 sq.	1/4	9/32		1
	Corners bevelled on one face.							

TABLE 62 BRACKET - 9G4

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	MAXIMUM CROSS SECTION		QUANTITY
1	4D4-220	Iron	Incomp	-	3/8 sq.		1
2	4B21-134	Iron	Incomp	10 5/8 (R)	1/2 x 1/4		1
	Two fastening fragments attached.						

TABLE 63 DOOR LOCK - 9G4

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	HOUSING					QUANTITY
				LENGTH	MAXIMUM WIDTH	MINIMUM WIDTH	PLATE: THICKNESS		
1	4A15-100	Iron	PART Comp	NA	NA	NA	NA		1
	Consisting only of a spindle with cam; length 7 3/16"; cam length 2 5/16".								
	4D3-	Iron	Incomp	6	3 13/16	NA	1/8 & 3/32	With a key (Variation 2) which is not the correct one.	1
	Complete except for a latch bolt spring. Two screws; Variation 1, length 2". Some evidence of heat.								
2	4C3-80	Iron	Comp	7 1/2	4 1/2	3 7/16	1/16		1
	4C8-2	Iron	Comp	7 1/2	4 1/2	3 1/2	1/16		1

TABLE 64 — DOOR LOCK, KEEPER - 9G4

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	DEPTH	PLATE: THICKNESS	STRIKER BAR: WIDTH	STRIKER BAR: HEIGHT	STRIKER BAR: THICKNESS	HOLE: DIAMETER	QUANTITY
1	4C8-18	Iron	Comp	5 15/16	1 3/4	1 7/16	1/16	7/16	NA	3/16	5/16	1
	Striker bar is brass.											
2	4D3-131	Iron	Comp	3 13/16	15/16	1 1/4	-	NA	NA	NA	NA	1
	One wrought nail in place; Variation A6.											

TABLE 65 — DOOR LOCK, KEY ESCUTCHEON - 9G4

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	THICKNESS	KEY HOLE: LENGTH	FASTENING HOLE: DIAMETER		QUANTITY
1	4B3-233	Iron	Comp	2 11/16	1 15/16	1/32	1 7/8	1/8		1
2	4C3-75	Iron	Comp	2 3/4	1 15/16	1/32	1 11/16	1/8		1

TABLE 66 — DOOR LOCK, LOCK BOLT - 9G4

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY
1	4B3-220	Iron	Comp	6	1
2	4D7-161	Iron	Comp	6 1/8	1

TABLE 67 — DOOR LOCK, TUMBLER - 9G4

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	LOOP: LENGTH AND WIDTH	QUANTITY
1	4B3-234	Iron	Comp	3 5/8	1 3/8 x 1 5/32	1

TABLE 68				EYE - 9G4						
VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	EYE: INSIDE DIAMETER	THREAD: DIAMETER	WASHER: LENGTH AND WIDTH		QUANTITY
2	4B3-235	Iron	Comp	5 3/4	5/16 sq.	1 1/4	-	1/2 sq.		1
	Similar objects have been used on scythe handles.									
3	4B6-87	Iron	Comp	2 3/4	3/16 x 1/8	7/16	NA	NA		1
	4D2-12	Iron	Comp	3 3/8	1/4 sq.	3/8 - 1/2 (E)	NA	NA		1
	4E1-170	Iron	Comp	3 1/2	5/16 x 1/8	1/2	NA	NA		1
10	4D7-163	Iron	Incomp	5 (R)	5/8	1/2	NA	NA		1
Ind	4D3-138	Iron	Frag	Ind	Ind	1/2	NA	NA		1
	Possible Variation 3. Could also be part of a gate hook.									

TABLE 69 — GATE HOOK - 934

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	HOOK: LENGTH	EYE: INSIDE DIAMETER	QUANTITY
3	4A10-27	Iron	Comp	4 7/8	9/32 x 1/4	1 3/4	3/8	1
	4A11-43	Iron	Comp	5 1/4	3/16 sq.	1 1/2	3/8	1
	SWINGING EYE: possible Variation 3; length 1 15/16"(R); inside diameter of eye 1/2".							
5	4C1-71	Iron	Comp	8 1/2	1/2	1 9/16	3/4	1

TABLE 70 — HASP - 934

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	MAXIMUM CROSS SECTION	PIVOT HOLE: WIDTH	LOCKING HOLE: WIDTH	QUANTITY
2	405-40	Iron	Comp	5	9/32 x 5/32	3/8	1/2	1

TABLE 71 | HINGE - 9G4

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	MINIMUM WIDTH	THICKNESS	NUMBER PER SIDE AND DIAMETER OF FASTENING HOLES	COUNTERSINKING	HOLE ARRANGEMENT	T PLATE: LENGTH	MEDIAN: WIDTH	JOINT: LENGTH	SOCKET: INSIDE DIAMETER	QUANTITY
1	4A3-89	Iron	Comp	2 3/16	2 3/8	NA	1/8	3, 1/4	F&B	Linear	NA	NA	NA	NA	1
	Two screws in place; Variation 1 or 2; length 1 3/16" and 1 1/16".														
	4A9-115	Iron	Incomp	3 3/16	15/16 (tml)	NA	5/32	3, 3/16	Front	Offset	NA	NA	NA	NA	1
	4B3-228	Iron	Incomp	4	1 3/8 (tml)	NA	3/16	4, 11/32	Front	Offset	NA	NA	NA	NA	1
	Two screws in place; possible Variation 1; length 1 3/4" and 1 9/16".														
	4C7-156	Iron	Comp	3	1 7/8	NA	1/8	3, 7/32	Front	Offset	NA	NA	NA	NA	1
	Four screws in place; Variation 1; length 1 1/4".														
	4D3-122	Iron	Comp	2 9/16	1 7/8	NA	3/16	3, 1/4	F&B	Linear	NA	NA	NA	NA	1
	Two screws in place; Variation 1; length 15/16".														
	4D7-164	Iron	Incomp	2 9/16	15/16 (tml)	NA	1/8	3, 5/16	F&B	Linear	NA	NA	NA	NA	1
2	4B3-229	Iron	Incomp	3 1/16	13/16 (tml)	NA	1/8	3, 1/4	Front	Linear	NA	NA	NA	NA	1
	One screw in place; possible Variation 1; length 1 3/8".														
	4B3-230	Iron	Incomp	3 1/16	1 3/4	NA	1/8	3, 1/4	Front	Linear	NA	NA	NA	NA	1
	One screw fragment in place; possible Variation 1 or 3.														

TABLE 71 (cont.) HINGE - 9G4

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	MINIMUM WIDTH	THICKNESS	NUMBER PER SIDE AND DIAMETER OF FASTENING HOLES	COUNTERSINKING	HOLE ARRANGEMENT	T PLATE: LENGTH	MEDIAN: WIDTH	JOINT: LENGTH	SOCKET: INSIDE DIAMETER	QUANTITY
	4D3-125	Iron	Comp	2	1 5/8	NA	1/8	2, 3/16	Front	Linear	NA	NA	NA	NA	1
	Two screws in place; Variation 1; length 3/4".														
3	4A3-88	Iron	Comp	3 9/16	2 5/8	NA	3/16	3, 1/4	F&B	Offset	NA	NA	NA	NA	1
	Two screws in place; Variation 1 or 2; length 1 1/2". Considerable heat distortion.														
	4B3-227	Iron	Par	4 1/2	1 3/4	NA	3/16 - 1/4	5, 1/4	F&B	Stggrd	NA	NA	NA	NA	1
	Four screws in place; possible Variation 1; length 1 1/2".														
3	4C8-116	Iron	Comp	3 15/16	2 3/8	NA	7/32	4, 1/4	Front	Stggrd	NA	NA	NA	NA	1
	Five screw fragments in place; possible Variation 1 or 3. Some heat deformation.														
	4D3-128	Iron	Frag	Ind	Ind	NA	Ind	Ind	Ind	Ind	NA	NA	NA	NA	1
	Severely distorted from heat. Pin length 3 3/4". Six screws present; Variation indeterminate.														
	4E1-168	Iron	Incomp	4	1 1/4 (tml)	NA	1/8	4, 1/4	Front	Offset	NA	NA	NA	NA	1
	One wrought nail in place; Variation A1l4, length 3 1/4".														
4	4A15-99	Iron	Incomp	6 1/4 (R)	2 3/16	1 3/8 (R)	1/8	3 & 3+, 1/4	Front	Stggrd	4 9/16	NA	NA	NA	1
6	4D3-124	Iron	Comp	1 7/32	1 7/8	NA	1/32 - 3/32	2 & 3, 3/16	Back	-	NA	NA	NA	NA	1
	Four wrought nails in place; Variation A2, length 2 1/2".														

TABLE 71 (cont.) HINGE - 9G4

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	MINIMUM WIDTH	THICKNESS	NUMBER PER SIDE AND DIAMETER OF FASTENING HOLES	COUNTERSINKING	HOLE ARRANGEMENT	T PLATE: LENGTH	MEDIAN: WIDTH	JOINT: LENGTH	SOCKET: INSIDE DIAMETER	QUANTITY
	4D3-127	Iron	Incomp	1 5/32	15/16 (tml)	NA	1/32 - 3/32	2 & 4+, 3/16	-	-	NA	NA	NA	NA	1
	Two wrought nails in place; Variation A4, length 2 7/8" and 3".														
7	4C3-72	Iron	Incomp	10 1/8 (R)	1 1/4	1/4 & 3/16	1/16	4, 3/16	Abs	Triang	NA	NA	NA	NA	1
	One wrought nail in place; Variation A116, length indeterminate.														
	4C8-120	Iron	Par	4 3/8 (R)	1 1/4	5/16	3/32	4, 5/32	Abs	Triang	NA	NA	NA	NA	1
	Possibly identical with 4C3-72. One wrought nail in place; Variation A94.														
8	4A12-238	Iron	Comp	8 1/8	2 5/8	NA	1/8	5, 3/16	Abs	Linear	NA	5/8	2 1/2	NA	1
	4C14-73	Iron	Comp	8	2 11/16	NA	1/8	3, 3/16	Abs	Linear	NA	1/2	2 1/2	NA	1
13	4B1-52	Iron	Comp	11 1/4	1	3/8	3/16	3, 3/16	Abs	Linear	NA	NA	NA	1/2	1
	4B3-221	Iron	Comp	10 3/4	1	7/16	3/16	3, 3/16	Abs	Linear	NA	NA	NA	1/2	1
	4B3-222	Iron	Incomp	10 1/4 (R)	1	3/8	3/16	2, 3/16	Abs	Linear	NA	NA	NA	1/2	1

TABLE 71 (cont.) HINGE - 9G4

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	MINIMUM WIDTH	THICKNESS	NUMBER PER SIDE AND DIAMETER OF FASTENING HOLES	COUNTERSINKING	HOLE ARRANGEMENT	T PLATE: LENGTH	MEDIAN: WIDTH	JOINT: LENGTH	SOCKET: INSIDE DIAMETER	QUANTITY
14	4C8-117	Iron	Comp	16	1 9/16	1/2	3/16	4, 9/32	Abs	Linear	NA	NA	NA	9/16	1
16	4B3-223	Iron	Par	12 3/4 (R)	1 1/8	7/16	1/8	2, 1/4	Abs	-	NA	NA	NA	1/2	1
	4B3-226	Iron	Frag	-	7/8	-	-	1, 1/4	-	Ind	NA	NA	NA	3/8	1
	4C7-155	Iron	Incomp	9 1/4 (R)	1 5/16	15/32	1/4	3, 1/4	Front	Linear	NA	NA	NA	17/32	1
19	4D3-123	Iron	Par	3 (E)	1 3/16 (tml)	NA	1/8 - 3/16	3, 1/4	Front	Offset	NA	NA	NA	NA	1
	Back marked with impressed lettering "_ark & C° Patent". One screw in place; Variation 1; length 1 3/4".														
Ind	4A6-18	Iron	Par	8 3/16 (R)	15/16 (R)	11/16	1/4	3, 1/4	Front	Linear	NA	NA	NA	Ind	1
	Possible Variation 4.														
	4C8-122	Iron	Frag	Ind	Ind	NA	Ind	Ind	Ind	Ind	NA	NA	NA	NA	1
	Cast; severely distorted by heat..														

TABLE 72 — HOOK - 9G4

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	HOOK			SHANK		QUANTITY
					MAXIMUM CROSS SECTION	WIDTH	HEIGHT	MAXIMUM CROSS SECTION	LENGTH	
1	4A14-70	Iron	Comp	5 1/8	15/32	2 1/2	2 1/8	3/8 sq.	2 5/8	1
	End of shank is clinched at right angles.									

TABLE 73 — KEY - 9G4

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	BOW		STEM		PIN		BIT			COLLAR: DIAMETER	QUANTITY
					LENGTH	WIDTH	LENGTH	DIAMETER	LENGTH	DIAMETER	LENGTH	WIDTH	THICKNESS		
2	4A18-111	Iron	Incomp	3 13/16 (R)	Ind	Ind	Ind	5/16	1 3/8	13/32	7/8	13/16	9/32	3/8	1
	4B21-35	Iron	Incomp	4 3/4 (R)	1 1/8	1 11/16	2 5/16	5/16	1 7/32	9/32	13/16	3/4	1/4	7/16	1
3	4A12-250	Iron	Comp	2 9/16	3/4	15/16	1 7/16	1/4	NA	NA	7/16	11/32	1/8	NA	1
Ind	4D4-213	Iron	Frag	Ind	Ind	1 13/16	Ind	Ind	Ind	Ind	Ind	Ind	Ind	Ind	1
	Possible Variation 1, 2, 3, or 4.														

TABLE 74				PADLOCK - 9G4						
				HOUSING						
VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	THICKNESS	PLATE: THICKNESS	BOW: MAXIMUM CROSS SECTION		QUANTITY
3	4D3-16	Iron	Comp	2 15/16	3 1/32	11/16	3/32	3/8		1
With a key in keyhole.										

TABLE 75 | PINTLE - 9G4

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	SHANK			PIN		WING:	NUMBER AND DIAMETER OF FASTENING HOLES	REINFORCING ARM		QUANTITY
				LENGTH	MAXIMUM CROSS SECTION	WIDTH AT SHOULDER	LENGTH	MAXIMUM DIAMETER	MAXIMUM WIDTH		LENGTH	MAXIMUM CROSS SECTION	
1	4B20-12	Iron	Comp	8 1/4	9/16 x 1/2	NA	1 1/2	5/8	NA	NA	NA	NA	1
2	4B3-236	Iron	Comp	5 3/4	5/8 x 7/16	NA	1 1/4	1/2	NA	NA	NA	NA	1
	Axis of point is horizontal.												
	4C3-31	Iron	Comp	5 1/8	1/2 x 7/16	NA	1 1/2	7/16	NA	NA	NA	NA	1
	Axis of point is vertical.												
	4D5-52	Iron	Comp	3 3/4	7/16 sq.	NA	1 1/8	7/16	NA	NA	NA	NA	1
	Axis of point is horizontal.												
4	4A14-69	Iron	Comp	4 3/8	1/2 x 7/16	NA	15/16	7/16	NA	NA	NA	NA	1
	4D7-162	Iron	Comp	4 3/8	1/2 sq.	NA	1	1/2	NA	NA	NA	NA	1
	Notched at heel.												
5	4A9-117	Iron	Comp	5 1/2	1/2 x 7/16	NA	1 13/32	3/8	NA	NA	NA	NA	1
	Axis of point is horizontal.												
10	4C9-64	Iron	Incomp	3 5/16 (R)	3/8 x 3/16	21/32	1	1/4	NA	NA	NA	NA	1

TABLE 75 (cont.) PINTLE - 9G4

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	SHANK			PIN		WING: MAXIMUM WIDTH	NUMBER AND DIAMETER OF FASTENING HOLES	REINFORCING ARM		QUANTITY
				LENGTH	MAXIMUM CROSS SECTION	WIDTH AT SHOULDER	LENGTH	MAXIMUM DIAMETER			LENGTH	MAXIMUM CROSS SECTION	
14	4B3-232	Iron	Comp	2 1/2	1/2 x 5/16	NA	31/32	5/16	2 9/16	3, 1/4	NA	NA	1
	4D5-53	Iron	Incomp	-	13/16 x 7/16	NA	15/16	1/2	2 11/16 & 2 7/16	3, 5/16	NA	NA	2
Ind	4A12-237	Iron	Incomp	-	13/32 x 3/8	NA	1 13/16	3/8	NA	NA	NA	NA	1
	Possible Variation 1 or 2.												
	4B22-11	Iron	Incomp	-	11/16 x 3/8	NA	1 7/16	1/2	NA	NA	NA	NA	1

TABLE 76 | SCREW - 904

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY
1	4A2-45	Iron	Comp	1 15/16	1
	4A3-91	Iron	Comp	11/16	1
	4B3-238	Iron	Comp	2 1/2	1
	4C3-33	Iron	Comp	2 5/8	1
	4C3-34	Iron	Comp	1 1/2	1
	4C8-77	Iron	Comp	1 1/2	5
	4C8-78	Iron	Comp	2 1/2	2
	4C8-79	Iron	Comp	1 3/4	2
	4C8-81	Iron	Comp	1 1/4	1
	4D3-135	Iron	Comp	1 3/4	1
	4D4-218	Iron	Comp	1 13/16	1
1	4D6-43	Iron	Comp	2 7/8	1
	4D6-44	Iron	Comp	1 1/2	1
	4D7-159	Iron	Comp	1 1/2	1
3	4C3-13	Iron	Comp	1	1
	4D4-217	Iron	Comp	2 1/2	1

TABLE 76 (cont.) | SCREW - 9G4

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY	VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY
4	4C12-43	Iron	Frag	Ind	1		4B13-4	Iron	Frag	Ind	1
							Possible Variation 1.				
Ind	4A21-7	Iron	Frag	Ind	1		4C1-150	Iron	Frag	Ind	1
	Possible Variation 1.						Possible Variation 1.				
	4A22-75	Iron	Frag	Ind	1		4C4-219	Iron	Frag	Ind	1
	Possible Variation 1.						Possible Variation 1.				
	4B3-239	Iron	Frag	Ind	1		4D7-158	Iron	Frag	Ind	1
	Possible Variation 1.						Possible Variation 1.				

TABLE 77				SHEETING - 9G4		
VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	MAXIMUM REMAINING DIMENSION		QUANTITY
Roof	4A9-114	Iron	Frag	4 1/2 x 3 3/16		1
	Hole (diameter 3/16") suggests use of a flat, circular headed nail.					
	4A18-113	Iron	Frag	5 1/4 x 23/4		1
	Wood adhering to one side. Three wrought nails in place; Variation A26, length 1 7/8".					
Iron	4A18-112	NA	Frag	6 x 4		1
	Some wood adhering. Two wrought nails in place; Variation A26, length 1 1/8".					

TABLE 78 SHUTTER DOG -- 9G4

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	CATCH				ANCHOR		QUANTITY
				LENGTH	LOOP: DIAMETER	MAXIMUM WIDTH	MAXIMUM THICKNESS	LENGTH	MAXIMUM CROSS SECTION	
1	4B3-328	Iron	Comp	5 5/16	2 1/4 & 1 5/8	NA	3/8	7	1/2 sq.	1
	Chisel point on anchor.									
3	4A18-109	Iron	Comp	6 9/16	2	13/16	7/32	5 5/8	5/16 sq.	1
	Chisel point on anchor.									
	4A22-87	Iron	Comp	5 9/16	1 3/4	3/4	1/4	5 5/8	3/8 sq.	1
	Chisel point on anchor.									
	4E1-167	Iron	Incomp	6	1 3/8	7/8	1/4	Ind	3/8 sq.	1
4	4A18-110	Iron	Comp	5 13/16	1 1/2	3/4	1/4	4 3/8	1/4 sq.	1
	Sharp point on anchor.									
Ind	4C6-82	Iron	PART Comp	NA	NA	NA	NA	5 3/4	5/16 sq.	1
	Consisting only of an anchor; chisel point.									

TABLE 79 SLIDING BOLT - 9G4

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	BOLT				PLATE				QUANTITY
				LENGTH	MAXIMUM CROSS SECTION	HANDLE		LENGTH	WIDTH	THICKNESS	NUMBER AND DIAMETER OF FASTENING HOLES	
						DIAMETER	HEIGHT					
1	4C1-151	Iron	Incomp	8 1/8	1/2 x 1/4	1	1 1/2	Ind	Ind	Ind	Ind	1
4	4A15-100	Iron	Comp	3 7/16	5/16 x 3/16	3/8	21/32	3 1/2	1 3/8	1/16	4, 1/8	1

Two wrought nail fragments in place: Variation A26.

TABLE 80 STAPLE - 9G4

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	INSIDE WIDTH	BAR: MAXIMUM CROSS SECTION	SHOULDER HEIGHT	PLATE			QUANTITY
								LENGTH	WIDTH	THICKNESS	
1	4C3-73	Iron	Comp	3 7/8	1 1/4	1/2	NA	2 13/16	1	1/16	1
	4C8-107	Iron	Comp	4 9/16	1 1/2	9/16	NA	3 1/16	1	1/16	1
	4C8-108	Iron	Comp	4 3/8	1 1/2	1/2	NA	2 7/8	1	1/16	1
	4C8-109	Iron	Comp	3 1/2	1 1/2	9/16	NA	2 13/16	1 1/16	1/16	1
2	4C3-32	Iron	Incomp	4 1/8	1 11/16	3/8	NA	Ind	Ind	Ind	1
	4C8-110	Iron	Incomp	3 3/4	1 11/16	3/8	NA	Ind	Ind	Ind	1
	4C8-111	Iron	Incomp	4 3/4	1 1/4	7/16	NA	Ind	Ind	Ind	1
3	4B6-86	Iron	Incomp	2 9/16	1 3/4	13/32	NA	NA	NA	NA	1
4	4D3-134	Iron	Comp	2 5/8	3/4	3/8	NA	NA	NA	NA	1

TABLE 80 (cont.) STAPLE - 9G4

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	INSIDE WIDTH	BAR: MAXIMUM CROSS SECTION	SHOULDER HEIGHT	PLATE LENGTH	PLATE WIDTH	PLATE THICKNESS	QUANTITY
5	4D4-211	Iron	Incomp	2 3/8	9/16	3/16	NA	NA	NA	NA	1
10	4A9-116	Iron	Incomp	1 5/8 (R)	1 7/16	5/8 x 3/16	3/4	NA	NA	NA	1
10	4B3-237	Iron	Incomp	2 3/4	2 5/16	9/16 x 1/8	1/2	NA	NA	NA	1
	4C13-74	Iron	Incomp	-	1 11/16	15/16 x 3/32	3/8	NA	NA	NA	1
	4D7-160	Iron	Incomp	2 1/4 (R)	1/4	5/16 x 1/8	3/4	NA	NA	NA	1
	4E1-166	Iron	Incomp	1 9/16 (R)	1 1/2	7/16 x 1/8	7/16	NA	NA	NA	1
11	4C8-112	Iron	Comp	2 5/8	2	5/16 sq.	NA	NA	NA	NA	1
Ind	4C1-149	Iron	Par	1 7/8 (R)	11/16	1/4	NA	NA	NA	NA	1
	Possible Variation 4 or 5.										
	4D4-210	Iron	Incomp	-	2 3/8	1 x 1/4	NA	NA	NA	NA	1
	Possible Variation 8.										

TABLE 81 — THUMB LATCH, BAR - 9G4

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	MAXIMUM WIDTH	MINIMUM WIDTH	THICKNESS	PIVOT END: WIDTH	PIVOT END: THICKNESS	PIVOT END: HOLE: DIAMETER	HANDLE: LENGTH	HANDLE: DIAMETER	QUANTITY
1	4A3-86	Iron	Comp	8 1/2	3/4	7/32	1/4	1 3/8	3/32	1/8	NA	NA	1
	Wear marks indicate a possible location of a guide 1 3/4" from the catch end.												
	4C8-114	Iron	Comp	8	3/4	1/4	5/32	1 1/4	1/16	3/16	NA	NA	1
	Wear marks indicate possible location of a guide 2" from catch end.												
	4C13-29	Iron	Comp	8 9/16	1/2	1/4	5/32	1 13/32	1/16	3/16	NA	NA	1
	Guide 2 1/8" from catch end; lift bar 2 3/16" from pivot end; mounted on right side of a door.												
	4C14-72	Iron	Comp	7 1/8	3/4	1/4	3/16	1 3/16	1/16	3/16	NA	NA	1
	Guide 1 7/16" from catch end; lift bar 2 13/16" from pivot end; mounted on right side of a door.												
	4D3-130	Iron	Comp	8 7/8	11/16	5/16	1/4	1 5/16	3/32	-	NA	NA	1
	Screw fragment in place; possible Variation 1, 2, or 3.												

TABLE 82 — THUMB LATCH, BAR LOCK - 9G4

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	MAXIMUM CROSS SECTION	PIVOT END: WIDTH	PIVOT END: THICKNESS		QUANTITY
1	4B19-109	Iron	Comp	3 1/16	9/16 x 1/4	3/4	1/8		1

TABLE 83 | THUMB LATCH, CATCH - 9G4

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	HOOK		REINFORCING SHANK		PLATE		NUMBER AND DIAMETER OF FASTENING HOLES	QUANTITY
						LENGTH	HEIGHT	LENGTH	DISTANCE FROM HOOK	LENGTH	WIDTH		
1	4C7-157	Iron	Comp	4 5/16	5/16 x 1/4	1 3/16	9/16	NA	NA	NA	NA	NA	1
	Axis of point is horizontal.												
	4D3-129	Iron	Comp	3 5/16	3/8 x 1/4	7/8	3/8	NA	NA	NA	NA	NA	1
	Axis of point is vertical.												
3	4C3-74	Iron	Incomp	Ind	3/8 x 1/4	1 9/16	3/4	3	1 3/16	NA	NA	NA	1
	4G3-1	Iron	Comp	7 5/8	9/16 x 3/8	2 1/2	1	5 1/4	1 5/16	NA	NA	NA	1
4	4A3-87	Iron	Par	Ind	Ind	Ind	Ind	NA	NA	1 13/16	13/16	2, 5/32	1
	Consisting only of a back plate.												
Ind	4C7-153	Iron	Incomp	Ind	3/8 x 5/16	7/8	3/8	NA	NA	NA	NA	NA	1
	Possible Variation 1 or 2.												

TABLE 84 THUMB LATCH, GUIDE - 9G4

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	THICKNESS	STAPLE: INSIDE WIDTH	STAPLE: INSIDE HEIGHT	HOLE: DIAMETER	COUNTERSINKING	QUANTITY
2	4D4-222	Iron	Incomp	3 5/16	13/16	3/16	1 11/16	-	1/4	-	1

TABLE 85 THUMB LATCH, HANDLE - 9G4

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	HANDLE: LENGTH	HANDLE: RISE	HANDLE: MAXIMUM WIDTH	HANDLE: DIAMETER	CUSP: WIDTH	LIFT BAR: LENGTH	NUMBER AND DIAMETER OF FASTENING HOLES	PLATE: WIDTH	PLATE: THICKNESS	QUANTITY
1	4C13-28	Iron	Comp	8 5/8	4 5/8	1 7/8	1	NA	2 3/4	4 5/16	3/cusp, 3/16	NA	NA	1
	Estimated door thickness - 1" - 1 5/16". One wrought nail fragment in place.													
	4C14-70	Iron	Comp	8 7/16	4 3/8	1 11/16	15/16	NA	2 1/2	4	3/cusp, 1/8	NA	NA	1
	Five wrought nails in place: Variation A2, length 2" (1); Variation A6 (4).													

TABLE 86 — NAIL DISTRIBUTION (Variation and Length) — 9G4

Length \ Variation	A1	A2	A3	A4	A5	A6	A7	A10	A11	A12	A13	A15	A16	A20	A21	A25	A26	A28	A29
3/4		2															5		
1		7															2		
1/4		20															3		
1/2		101							3								4		
3/4		51			1				2								1		
2		49	1						5										
1/4		106							5								5		
1/2		418		1					25		1						4		
3/4		209		1	1				10								1		
3		93							6										1
1/4		27							4									1	1
1/2		43		2					17								1		
3/4		20							6										
4		24		2					4										
1/4		16		1					2										
1/2		100	1	2	1				11									1	1
3/4		76							6										
5		76		1					9									1	
1/4		51			1				1										
1/2		100		1	1				4				2						
3/4		46							7						1				
6		40		1					2										
1/4		9			1				1										
1/2		46	1						4										
3/4		25	1						3								1		
7		59	6	1					4								1		
1/4		40	4						3	1									
1/2		71	6	1					2										
3/4		22	1		1														
8		10	2		2				1										
1/4		5	2																
1/2		8																	
3/4		2	1																
9		6	1																
1/4		12																	
1/2		16	1														1		
3/4		6																	
10		4		1															
1/4		2																	
1/2																			
3/4							1												
11																			
1/4																			
1/2																			
3/4																			
12																			
1/4																			
1/2																			
3/4				1															
13																			
1/4																			
1/2																			
3/4																			
Indeterminate																			
TOTAL	777	2018	28	17	9	1570	1	6	147	1	1	82	2	1	1	2	29	2	2

TABLE 86(cont.) NAIL DISTRIBUTION (Variation and Length) – 964

Length \ Variation	A30	A36	A37	A38	A43	A49	A52	A57	A59	A60	A61	A62	A63	A69	A70	A71	A72	A74	A78
3/4																			
1																			
1/4		1																	
1/2		2																	
3/4		2																	
2									2										
1/4																			
1/2		1					1												
3/4			2																
3		1	2																
1/4			1								2								
1/2							1												
3/4												1							
4			1																
1/4																			
1/2									1										
3/4									1					1					1
5											1			1					
1/4											2			2		1			
1/2																			1
3/4														1					
6															1				
1/4																		1	
1/2																1		3	1
3/4											1								
7																			2
1/4																			1
1/2																			2
3/4														1					2
8											1			1					
1/4										1	1								
1/2															1				
3/4																			
9																			
1/4															1				
1/2																			
3/4										1									
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate																			
TOTAL	51	7	6	10	2	1	2	1	4	2	8	1	17	7	3	2	6	4	10

TABLE 86(cont.) NAIL DISTRIBUTION (Variation and Length) — 964

Length \ Variation	A81	A82	A83	A86	A90	A92	A94	A95	A96	A98	A100	A110	A114	A116	A118	B1	B3	B5	B6
3/4																			
1																			
1/4				1									1						25
1/2																			22
3/4						1													5
2										1			3						3
1/4						1							1						8
1/2						4													4
3/4						1													1
3																	2		17
1/4						1							1					1	8
1/2				1		1													10
3/4						1													6
4						1													42
1/4				1															32
1/2									1										27
3/4									1										31
5								2	2										34
1/4																			43
1/2				1															25
3/4																			7
6																			7
1/4		1																	7
1/2		1																	12
3/4																			5
7												1							9
1/4																			2
1/2																			
3/4																			
8																			
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate													1	1					
TOTAL	9	2	1	4	2	12	25	2	4	1	1	1	6	1	13	49	2	1	402

TABLE 86(cont.) NAIL DISTRIBUTION (Variation and Length) — 9G4

Length \ Variation	B8	B15	C1	C2	D7	D14		TOTAL
3/4								
1								2
1/4								5
1/2								12
3/4				1				50
2								32
1/4				3				60
1/2								59
3/4		1		5	1	1		123
3				1				460
1/4								228
1/2								110
3/4								34
4				1				81
1/4				6				41
1/2				81				47
3/4				1				27
5				1				161
1/4								115
1/2								116
3/4								87
6								143
1/4								98
1/2								69
3/4								21
7								59
1/4								44
1/2								164
3/4								55
8								91
1/4								30
1/2								16
3/4								7
9								16
1/4								3
1/2								12
3/4								14
10								19
1/4								7
1/2								5
3/4								2
11								1
1/4								
1/2								1
3/4								2
								6
								2
								3
								1
								2
								3
								1
								1
								1
								2
								1
								1
								1
Indeterminate								2
TOTAL	222	1	4	100	1	1		

TABLE 87

BOLT - 9G32

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	THREAD: DIAMETER	QUANTITY
1	32J2-272	Iron	Comp	3 3/16	5/16	3/8	1

TABLE 88

HASP - 9G32

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	MAXIMUM CROSS SECTION	PIVOT HOLE: WIDTH	LOCKING HOLE: WIDTH	QUANTITY
3	32H1-89	Iron	Par	3 5/16 (R)	5/8 x 1/4	Ind	9/16	1

TABLE 89 HINGE - 9G32

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	MINIMUM WIDTH	THICKNESS	NUMBER PER SIDE AND DIAMETER OF FASTENING HOLES	COUNTERSINKING	HOLE ARRANGEMENT	T PLATE: LENGTH	MEDIAN: WIDTH	JOINT: LENGTH	SOCKET: INSIDE DIAMETER	QUANTITY
3	32C1-65	Iron	Incomp	4 1/2	1 13/16 (R)	NA	3/16	5, 1/4	F&B	Stggrd	NA	NA	NA	NA	1
	Front marked with the impressed letters _ATENT.														
18	32J2-273	Iron	Incomp	10 1/4 (R)	1 5/16	5/16 (R)	5/16	3, 1/4	Back	Linear	NA	NA	NA	1/2	1
Ind	32J2-274	Iron	Incomp	3 3/4 (R)	1 1/4 (tml)	NA	1/16	2, 1/4	Abs	Linear	NA	1/4	2 1/2	NA	1
	Possible Variation 8 or 9.														

TABLE 90 HOOK - 9G32

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	HOOK			SHANK		QUANTITY
					MAXIMUM CROSS SECTION	WIDTH	HEIGHT	MAXIMUM CROSS SECTION	LENGTH	
1	32K1-24	Iron	Comp	2 15/16	1/4	1 5/8	1 3/16	1/4 sq.	1 5/16	1

TABLE 91 KEY - 9G32

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	BOW		STEM		PIN		BIT			COLLAR: DIAMETER	QUANTITY
					LENGTH	WIDTH	LENGTH	DIAMETER	LENGTH	DIAMETER	LENGTH	WIDTH	THICKNESS		
4	32C1-64	Iron	Comp	2 15/16	25/32	1 1/4	2 5/32	5/16	NA	NA	9/16	1/2	3/16	NA	1

TABLE 92 PINTLE - 9G32

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	SHANK			PIN		WING: MAXIMUM WIDTH	NUMBER AND DIAMETER OF FASTENING HOLES	REINFORCING ARM		QUANTITY
				LENGTH	MAXIMUM CROSS SECTION	WIDTH AT SHOULDER	LENGTH	MAXIMUM DIAMETER			LENGTH	MAXIMUM CROSS SECTION	
2	32C1-63	Iron	Comp	4 3/16	1/2 x 7/16	NA	1 5/8	15/32	NA	NA	NA	NA	1
	Axis of point is horizontal.												
Ind	32B1-104	Iron	Incomp	3 9/16 (R)	9/16 x 5/16	NA	1 3/4	1/2	NA	NA	NA	NA	1
	End of pin is bevelled. Possible Variation 8 or 9.												
	32D1-68	Iron	Incomp	2 15/16 (R)	5/8 x 7/16	NA	1 3/8	1/2	NA	NA	NA	NA	1

TABLE 93 STAPLE - 9G32

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	INSIDE WIDTH	BAR: MAXIMUM CROSS SECTION	SHOULDER HEIGHT	PLATE LENGTH	PLATE WIDTH	PLATE THICKNESS	QUANTITY
9	32C1-62	Iron	Incomp	2 13/16	1 3/8	1/4 sq.	NA	NA	NA	NA	1
10	32A1-	Iron	Par	3 1/16 (R)	3 (R)	5/8 x 1/8	13/16	NA	NA	NA	1

TABLE 94 THUMB LATCH, BAR - 9G32

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	MAXIMUM WIDTH	MINIMUM WIDTH	THICKNESS	PIVOT END WIDTH	PIVOT END THICKNESS	PIVOT END HOLE: DIAMETER	HANDLE LENGTH	HANDLE DIAMETER	QUANTITY
3	32J2-275	Iron	Comp	6 15/16	5/8	1/4	3/16	3/4	1/16	-	13/16	11/16	1
Ind	32A1-276	Iron	Frag	1 1/4 (R)	Ind	9/16	Ind	1	1/16	7/32	Ind	Ind	1

Consisting of a pivot end only. Possible Variation 1, 2, or 3.

TABLE 95 NAIL DISTRIBUTION (Variation and Length) – 9G32

Length \ Variation	A1	A2	A3	A4	A5	A6	A11	A13	A14	A15	A26	A28	A29	A30	A31	A34	A47	A51	A52
3/4																			
1																			
1/4		1									1				1				
1/2		1			1		1				1								
3/4		2			2		1				2				3				
2		1 5		1	4 1														
1/4		3 6			2 1						1								
1/2		3 2		1	1 2														
3/4		2 1		1	3 4				1										
3		4 6 9		1 2 5	3 6 10		1		2				1			1		1	1
1/4		9 9		2	18 14		2		1										1
1/2		7 12		4 1	3 6		1		1			1					1		1
3/4		9 7		1 1	7 9		1												
4		8 8	1		8 6		1												
1/4		2 5	2 2	1 2	3 4														
1/2		3 2	2 3	2	3 5			1											
3/4		4 2	1	1	6 5														
5		2 1	1	3	1 1														
1/4		1 1	1		2														
1/2																			
3/4		1 1																	
6		1																	
1/4																			
1/2																			
3/4																			
7																			
1/4																			
1/2																			
3/4				1															
8																			
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate																			
TOTAL	94	141	13	30	141	114	8	1	5	4	5	1	1	6	4	1	1	1	3

TABLE 95 (cont.) NAIL DISTRIBUTION (Variation and Length) – 9G32

Length \ Variation	A54	A60	A61	A63	A69	A70	A71	A72	A78	A79	A80	A81	A87	A88	A90	A92	A93	A94	A95
3/4																			
1																			
1/4																			
1/2																			
3/4													1						
2																			
1/4																			
1/2			1																
3/4																			
3																			
1/4														1			1		
1/2																1			
3/4																	1		
4																			
1/4																			
1/2																			
3/4									1	1 2									2
5					1 1 1 2	1			1	1									1
1/4																			
1/2																			
3/4					1														
6						1													
1/4																			
1/2						1 3 4				1									
3/4			1			1	1				1								
7																			
1/4																			
1/2		1																	
3/4																			
8																			
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate																			
TOTAL	2	1	2	2	6	11	1	14	1	5	1	4	1	1	1	1	2	4	3

TABLE 95 (cont.) NAIL DISTRIBUTION (Variation and Length) — 9G32

Length \ Variation	A96	A102	A115	A118	B5	B6	B8	C2		TOTAL
3/4										
1										
1/4										3
1/2						1				5
3/4						1				11
2		1				1				5
1/4					1			1		9
1/2						1				6
3/4						1				10
3						1				6
1/4						3				4
1/2						7				7
3/4						12				7
4						4		2		10
1/4						4				19
1/2						2				33
3/4										44
4						2				34
1/4	1							4		22
1/2	1							2		22
3/4								1		18
5	1									19
1/4										17
1/2										15
3/4										14
6						1				15
1/4										10
1/2										12
3/4										14
7										10
1/4										10
1/2										4
3/4										6
8										4
1/4										2
1/2										
3/4										2
9										1
1/4										1
1/2										2
3/4										2
10										3
1/4										4
1/2										3
3/4										1
11										
1/4										1
1/2										1
3/4										
Indeterminate			1							1
TOTAL	3	1	1	3	1	41	21	10		

South Storehouse, Gunshed (9G5; Fig. 48: structure 5) Construction of the storehouse was during period I, possibly as early as 1780. By 1814 a gunshed had been added along one side. During the 1820s its use was discontinued and it was probably removed. A site plan for 1831 shows only a foundation in the area.

A total of eight door lock parts (Table 98) represent a minimum of five different locks. Only two thumb latch parts are present (Tables 109, 110), possibly from the same latch. The majority of hinges (Table 101) are wrought, four of the total are of the general H-HL form. Only one fragment of a cast hinge is present. The small number of screws (Table 106) is consistent with the absence of cast hinges. The one pintle (Table 104), in view of its size, may be from a cupboard or a piece of furniture.

Wrought nails predominate (95.3 per cent; Table 29) as could be expected for a building which was no longer in existence when the cut nail forms in the collection became available. The cut nails are probably intrusive.

TABLE 96	BOLT - 9G5							
VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	THREAD: DIAMETER		QUANTITY
3	5A1-153	Iron	Comp	4 5/8	7/16 sq.	1/2		1
	NUT: Variation 1; 1 5/16" sq. x 7/16".							
	5B5-94	Iron	Incomp	-	15/32 sq.	Ind		1
	5X5-42	Iron	Comp	4 5/8	15/32 sq.	9/16		1
	NUT: Variation 1; 1 5/16" x 1 1/4" x 1/2".							
5	5A1-154	Iron	Comp	4 5/8	17/32	15/32		1
8	5B1-130	Iron	Comp	3 1/4	7/16	1/2		1
18	5F1-52	Iron	Frag	Ind	3/8	Ind		1
	Edges bevelled on shank.							
22	5B1-131	Iron	Incomp	6 1/16	3/8	3/8		1
	Washer at head is absent; head 3/8" sq. x 9/16" long.							
Ind	5M3-106	Iron	Incomp	Ind	17/32	Ind		1
	Possible Variation 1.							

TABLE 97 — NUT - SG5

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH AND WIDTH or DIAMETER	THICKNESS	HOLE: DIAMETER	QUANTITY
1	5A1-152	Iron	Comp	1 3/16 sq.	5/8	5/8	1

Corners bevelled on one surface.

TABLE 98 | DOOR LOCK - 9G5

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	HOUSING: LENGTH	HOUSING: MAXIMUM WIDTH	HOUSING: MINIMUM WIDTH	HOUSING: PLATE: THICKNESS		QUANTITY
1	5E3-	Iron	PART Comp	NA	NA	NA	NA		1
	Consisting only of a cam from a spindle; length 2 5/8".								
	5F5-27	Iron	PART Comp	NA	NA	NA	NA		1
	Consisting only of a lock bolt; length 6 3/4".								
	5G2-27	Iron	PART Incomp	NA	NA	NA	NA		1
	Consisting only of an incomplete lock bolt; length 4 7/8" (R).								
2	5B2-100	Iron	PART Comp	NA	NA	NA	NA		1
	Consisting only of a lock bolt; length 4 1/2".								
3	5B1-162	Iron	PART Comp	4	3 1/4	NA	-		1
	Consisting only of a front plate.								
Ind	5B5-96	Iron	Par	8 1/2	Ind	Ind	-		1
	5C5-17	Iron	PART Frag	NA	NA	NA	NA		1
	Consisting only of a tail fragment of a lock bolt; possible Variation 2.								
	5N3-36	Iron	PART Comp	10 1/4 (R)	Ind	Ind	Ind		1
	Consisting only of one side of a housing; possible Variation 1 or 3.								

TABLE 99 EYE - 9G5

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	EYE: INSIDE DIAMETER	THREAD: DIAMETER	WASHER: LENGTH AND WIDTH		QUANTITY
2	5C5-18	Iron	Comp	6 1/4	7/8 x 13/16	1 3/16	1/2	NA		1
	Could also have served as a socket type pintle.									
Ind	5D2-28	Iron	Incomp	-	7/16 x 5/16	5/8	NA	NA		1
	Several chisel cut barbs on an incomplete shank; possible Variation 9.									

TABLE 100 HASP - 9G5

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	MAXIMUM CROSS SECTION	PIVOT HOLE: WIDTH	LOCKING HOLE: WIDTH		QUANTITY
3	5A1-164	Iron	Comp	5 7/16	3/8 x 1/4	1/2	1/2		1
	Bent at right angles 1 13/16" from the pivot end.								

TABLE 101 | HINGE - 9G5

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	MINIMUM WIDTH	THICKNESS	NUMBER PER SIDE AND DIAMETER OF FASTENING HOLES	COUNTERSINKING	HOLE ARRANGEMENT	T PLATE: LENGTH	MEDIAN: WIDTH	JOINT: LENGTH	SOCKET: INSIDE DIAMETER	QUANTITY
9	5B1-159	Iron	Incomp	7	-	NA	1/16	7, 3/16	Abs	Linear	NA	-	-	NA	1
	5B3-55	Iron	Par	9	-	NA	1/8	4, 1/4	Front	Linear	NA	-	3	NA	1
Ind	5A1-157	Iron	Frag	3 3/16 (R)	1 1/16 (R)	-	1/8	3, 1/8	Abs	Triang	NA	NA	NA	-	1
	Possible Variation 7.														
	5A1-165	Iron	Frag	3 5/16 (R)	1 1/16 (R)	-	1/16	3, 1/8	Abs	Triang	NA	NA	NA	-	1
	Possible Variation 7.														
	5D1-21	Iron	Frag	6 1/2 (R)	1 (tml)	NA	1/8	4, 1/8	Abs	Linear	NA	-	2 1/2	NA	1
	Possible Variation 8 or 9.														
	5G2-26	Iron	Frag	3 1/4 (R)	1 3/16 (R)	NA	1/16	3, 5/32	Abs	Triang	NA	NA	NA	NA	1
	Possible Variation 7.														
	5N1-39	Iron	Frag	Ind	Ind	9/16	Ind	1, 3/16	Abs	Ind	NA	NA	NA	Ind	1
	Consisting only of an end treatment.														
	5N3-34	Iron	Par	5 3/8 (R)	1 5/8	1 1/4 (R)	1/8	1, 1/4	Abs	Ind	NA	NA	NA	7/16	1
	Possible Variation 13 or 14.														

TABLE 101 (cont.) HINGE - 9G5

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	MINIMUM WIDTH	THICKNESS	NUMBER PER SIDE AND DIAMETER OF FASTENING HOLES	COUNTERSINKING	HOLE ARRANGEMENT	T PLATE: LENGTH	MEDIAN: WIDTH	JOINT: LENGTH	SOCKET: INSIDE DIAMETER	QUANTITY
	5N3-35	Iron	Frag	1 5/8 (R)	1 1/16 (R)	NA	1/8 - 3/16	2, 1/4	Front	Ind	NA	NA	NA	NA	1
	Possible Variation 1, 2, or 3.														
	5X2-35	Iron	Incomp	7	2 1/16 (tml)	NA	1/8	5&2, 3/16	Abs	Linear	NA	1 3/16 (tml)	1 11/16	NA	1
	Possible Variation 8 or 9. One median strap bent at right angles at meeting with vertical strap.														

TABLE 102 KEY - 9G5

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	BOW		STEM		PIN		BIT			COLLAR: DIAMETER	QUANTITY
					LENGTH	WIDTH	LENGTH	DIAMETER	LENGTH	DIAMETER	LENGTH	WIDTH	THICKNESS		
Ind	5N3-32	Iron	Par	Ind	1 3/16	1 3/4	Ind	-	Ind	Ind	Ind	Ind	Ind	Ind	1
	Possible Variation 1, 2, 3, or 4.														

TABLE 103	PADLOCK - 965	
Ind	VARIATION	
5B1-163	PROVENIENCE	
Iron	MATERIAL	
Incomp	COMPLETENESS	
2 11/16	LENGTH	HOUSING
2 5/8	WIDTH	
13/16	THICKNESS	
1/16	PLATE: THICKNESS	
Ind	BOW: MAXIMUM CROSS SECTION	
3/8		
1	QUANTITY	

Possible Variation 2.

TABLE 104	PINTLE - 965	
5B4-42	PROVENIENCE	
Iron	MATERIAL	
Par	COMPLETENESS	
3 1/4	LENGTH	SHANK
3 1/8	MAXIMUM CROSS SECTION	
7/8	WIDTH AT SHOULDER	
1/16	LENGTH	PIN
Ind	MAXIMUM DIAMETER	
1	QUANTITY	

Possible Variation 2.

11	VARIATION	
5X2-36	PROVENIENCE	
Iron	MATERIAL	
Incomp	COMPLETENESS	
Ind	LENGTH	SHANK
3/16 x 1/8	MAXIMUM CROSS SECTION	
7/16	WIDTH AT SHOULDER	
1	LENGTH	PIN
9/32	MAXIMUM DIAMETER	
NA	WING: MAXIMUM WIDTH	
NA	NUMBER AND DIAMETER OF FASTENING HOLES	
2 9/32	LENGTH	REINFORCING ARM
9/32	MAXIMUM CROSS SECTION	
1	QUANTITY	

TABLE 105 RIVET - 9G5

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	MAXIMUM CROSS SECTION	HEAD: DIAMETER	WASHER: LENGTH AND WIDTH		QUANTITY
2	5A1-151	Iron	Comp	2 5/8	1/4	-	-		1

TABLE 106 SCREW - 9G5

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY	VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY
1	5A1-155	Iron	Comp	2 9/16	1		5F2-49	Iron	Comp	2 7/8	1
	5B3-53	Iron	Comp	1 1/2	1		5G1-47	Iron	Comp	2 11/16	1
	5Q2-28	Iron	Comp	1 15/16	1		5Q1-29	Iron	Comp	2 9/16	1
4	5A1-156	Iron	Comp	1 7/8	1	Ind	5G5-35	Iron	Comp	Ind	1

Possible Variation 1.

TABLE 107 — SHUTTER DOG - 9G5

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	CATCH: LENGTH	CATCH: LOOP: DIAMETER	CATCH: MAXIMUM WIDTH	CATCH: MAXIMUM THICKNESS	ANCHOR: LENGTH	ANCHOR: MAXIMUM CROSS SECTION	QUANTITY
Ind	5G1-48	Iron	PART Comp	NA	NA	NA	NA	4 1/2	5/16 x 1/4	1
	Consisting only of an anchor; chisel point.									

TABLE 108 — STAPLE - 9G5

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	INSIDE WIDTH	BAR: MAXIMUM CROSS SECTION	SHOULDER HEIGHT	PLATE: LENGTH	PLATE: WIDTH	PLATE: THICKNESS	QUANTITY
5	5B1-158	Iron	Incomp	5 3/4	1	3/8 sq.	NA	NA	NA	NA	1
8	5A1-166	Iron	Comp	2 11/16	3/4	3/8 x 1/4	NA	NA	NA	NA	1
	Bar bent on a narrow side.										
	5A3-20	Iron	Incomp	2 3/16 (R)	1 3/8	1/2 x 1/4	NA	NA	NA	NA	1
Ind	5B5-95	Iron	Incomp	1 3/4 (R)	1/2	3/8 sq.	NA	NA	NA	NA	1
	Possible Variation 4 or 5.										
	5F1-50	Iron	Incomp	1 13/16 (R)	3/4	5/16 sq.	NA	NA	NA	NA	1
	Possible Variation 4 or 5.										

TABLE 109 — THUMB LATCH, BAR - 9G5

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	MAXIMUM WIDTH	MINIMUM WIDTH	THICKNESS	PIVOT END WIDTH	PIVOT END THICKNESS	PIVOT END HOLE: DIAMETER	HANDLE LENGTH	HANDLE DIAMETER	QUANTITY
2	5A1-	Iron	Incomp	6 9/16	29/32	9/16	5/16	1	3/16	-	NA	NA	1

Lift bar 1 1/16" from pivot end; guide 3 3/4" from pivot end; attachment to right side of a door.

TABLE 110 — THUMB LATCH, CATCH - 9G5

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	HOOK LENGTH	HOOK HEIGHT	REINFORCING SHANK DISTANCE FROM HOOK	REINFORCING SHANK LENGTH	PLATE LENGTH	PLATE WIDTH	NUMBER AND DIAMETER OF FASTENING HOLES	QUANTITY
Ind	5N3-33	Iron	Incomp	2 11/16 (R)	5/8 x 13/32	1 1/8	3/4	NA	NA	NA	NA	NA	1

End of hook is blunt.

TABLE 111 NAIL DISTRIBUTION (Variation and Length) — 965

Length \ Variation	A1	A2	A3	A4	A5	A6	A14	A15	A26	A28	A29	A30	A31	A33	A34	A35	A42	A43	A46
3/4																			
1					1										1				
1/4		2			1				1				1		1				
1/2		3		2	1				1	1	1		1	2	1		1		
3/4		2		1	4						1		1						
2		5			6				1	3				1					
		5		2	4				1										
1/4		9		4	8		1				1				1				
1/2		14		2	5					1									1
3/4		6			2				2		1								
3		5	1	3	3												1		
		3	1	5	4														
		5		3	3		1							1					
		3		4	5														
		6		6	3														
		11		8	9						1								1
1/4		11		5	9														
1/2		22	1	8	19														
3/4		12		9	10														
4		8		10	20														
		17		6	13		1												
		8	1	4	14														
		6	2	3	10														
1/4		8	1	8	13														
1/2		11		9	14														
3/4		6		10	7														
5		5		3	5														
		4	1	5	4														
		6	6	11	6														
		3	4	9	3														
		1	2	5	2														
1/4		1	6	2	3														
1/2			1	2	1														
3/4		1	1	1															
6			2	2	3														
		1			1														
1/4																			
1/2		1			3														
3/4																			
7		1	1	1	1														
1/4																			
1/2			1																
3/4			2																
			1																
8																			
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate					3														
TOTAL	291	212	35	153	219	393	3	5	6	5	5	10	3	4	4	3	2	1	2

TABLE 111 (cont.) NAIL DISTRIBUTION (Variation and Length) — 965

Length \ Variation	A47	A48	A49	A50	A51	A52	A54	A57	A59	A60	A61	A62	A63	A69	A70	A71	A72	A76	A78
3/4																			
1																			
1/4				1															
1/2						1													
3/4						1													
2	1				1														
1/4																			
1/2					2														
3/4	1				1	2					1								
3		1																1	
1/4																			
1/2												1							
3/4	1																		
4									1										1
1/4																			1
1/2																			2
3/4											1								3
5										1	3			2	1				2
1/4										1	4	1		1					1
1/2										2	2			1	1	1			1
3/4										2	1			1					1
6										1									
1/4										1					1				
1/2																			
3/4										1									
7														1					
1/4																			
1/2																			
3/4										1				1					
8																			
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
indeterminate																			
TOTAL	3	1	2	1	4	4	6	1	1	10	12	2	13	6	3	1	11	1	12

TABLE 111 (cont.) NAIL DISTRIBUTION (Variation and Length) —965

Length \ Variation	A79	A80	A81	A86	A88	A89	A90	A92	A93	A94	A95	A96	A100	A103	A107	A114	A118	B1	B3
3/4																			
1																			
1/4																			
1/2									1										
3/4				1															
2						1		1											
1/4		1						1	1			1							
1/2								1	2			1							1
3/4								3	2										
3								2	1										
1/4									1			1							
1/2		1						1	1										
3/4					1			1						1					
4		1							1			1							
1/4		1										1							
1/2	4							1			1								
3/4	1							1	1		1	2							
5	3	1									4	1							
1/4	2								1		5	1							
1/2	1										4								
3/4											1								
6											1								
1/4	1																		
1/2																			
3/4	1																		
7																			
1/4																			
1/2																			
3/4																			
8																			
1/4																			
1/2																			
3/4															1				
9																			
1/4																			
1/2															1				
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate																1			
TOTAL	13	6	13	1	1	1	2	14	13	27	17	9	1	1	2	1	8	3	1

TABLE 111(cont.) NAIL DISTRIBUTION (Variation and Length) — 965

Length \ Variation	B6	B7	B8	D1	TOTAL
3/4					
1					2
1/4	1				4
	2				13
1/2	1				9
	1				11
3/4					17
					13
2	1				27
					25
1/4	1				15
					17
1/2	2				21
					19
3/4				2	20
	3				19
3	1				33
	2				28
1/4	3	1			55
					32
1/2	2				44
					38
3/4					30
					23
4					32
					36
1/4					25
					20
1/2					22
					42
3/4					29
					17
5					19
					10
1/4					10
					13
1/2					3
	1				3
3/4					3
6					
					2
1/4					2
					1
1/2					
					1
3/4					
7					
					1
1/4					1
					2
1/2					1
3/4					2
8					
1/4					
1/2					
3/4					1
9					
1/4					
					1
1/2					
3/4					
10					
1/4					
1/2					
3/4					
11					
1/4					
1/2					
3/4					
Indeterminate					4
TOTAL	21	1	38	2	

North Storehouse (9G6; Fig. 48: structure 6)

Two buildings apparently occupied this site, the first being constructed during period I, possibly as early as 1780. Repairs had been made by 1815. Its condition deteriorated thereafter, partly through a fire in 1817, and by 1823 had deteriorated even further. Although repairs were suggested it is not stated whether they were ever made. Plans of 1831 and 1838 do not show a building in the area but a plan of the 1850s shows a much smaller building there. This second building survived until after 1867 and would probably have been sold for removal in 1872.

The two different construction events, separated by a period of possibly 60 or 70 years are not reflected in the artifacts (Tables 112-135). The nails are still predominantly wrought (96.2 per cent; Table 29), consistent with construction during period I, and only one fragment of cast hinge is present (Table 126). The remaining hinges (Table 120) are wrought with six being of the general H-HL form. It is likely that the artifacts are primarily related to earlier construction. The small quantity of cut nails, proportionately less than in the North Storehouse, would again be intrusive.

TABLE 112 | BOLT -- 9G6

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	THREAD: DIAMETER		QUANTITY
1	6D2-103	Iron	Comp	3 1/2	3/8	11/32		1
3	6E2-128	Iron	Incomp	2 1/4 (R)	9/16	9/16		1
	Corners of head bent down slightly.							
	6F4-94	Iron	Incomp	2 1/4 (R)	17/32	1/2		1
	Edges of head slightly bevelled.							
	6H2-19	Iron	Incomp	4 7/16(R)	1/2	1/2		1
6	6E2-124	Iron	Comp	3 7/8	7/16	15/32		1
	NUT: Variation 1; 1" x 1 1/16" x 5/16".							
7	6F4-97	Iron	Incomp	2 7/16	25/32	23/32		1
	Head diameter 2 3/8".							
Ind	6E2-132	Iron	Incomp	-	9/16	Ind		1

TABLE 113 — NUT - 9G6

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH AND WIDTH or DIAMETER	THICKNESS	HOLE: DIAMETER	QUANTITY
1	6F4-93	Iron	Comp	1 11/16 sq.	9/16	5/8	1

Edges bevelled on one surface.

TABLE 114 — BRACKET - 9G6

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	MAXIMUM CROSS SECTION	QUANTITY
1	6E2-127	Iron	Incomp	-	7/16 sq.	1

TABLE 115 CLEVIS PIN - 9G6

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	DIAMETER	HOLE: LENGTH AND WIDTH		QUANTITY
1	6E2-126	Iron	Comp	5 1/2	9/16	-		1
Ind	6E2-135	Iron	Incomp	-	1/2	-		1
	Possible Variation 1.							

TABLE 116 DOOR LOCK - 9G6

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	HOUSING: LENGTH	HOUSING: MAXIMUM WIDTH	HOUSING: MINIMUM WIDTH	HOUSING: PLATE: THICKNESS		QUANTITY
2	6E2-123	Iron	Incomp	6 15/16	3 7/16	2 7/8	1/16		1
	Lock bolt is absent.								
Ind	6B1-53	Iron	PART Incomp	NA	NA	NA	NA		1
	Consisting only of the tail of a lock bolt; possible Variation 1.								
	6H5-15	Iron	PART Comp	4 9/16	NA	NA	NA		1
	Consisting only of a side plate from a housing; possible Variation 1 or 3.								

TABLE 117 DOOR LOCK, KEEPER - 9G6

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	DEPTH	PLATE: THICKNESS	STRIKER BAR			HOLE: DIAMETER	QUANTITY
								WIDTH	HEIGHT	THICKNESS		
2	6J2-62	Iron	Incomp	3 3/8	15/16	13/16	1/16	NA	-	1/16	1/4	1
3	6J2-61	Brass	Incomp	3 1/4(R)	13/16(front) 15/16(back)	23/32	1/16	1/16	1/4	NA	1/4	1

TABLE 118				EYE - 9G6						
VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	EYE: INSIDE DIAMETER	THREAD: DIAMETER	WASHER: LENGTH AND WIDTH		QUANTITY
3	6F1-39	Iron	Par	Ind	Ind	9/16	NA	NA		1
	6J3-63	Iron	Incomp	2 3/4 (R)	5/16 x 7/32	5/16	NA	NA		1
4	6E2-140	Iron	Incomp	-	5/8 x 3/16	5/16	NA	NA		1
	Eye is countersunk on one surface.									
	6E2-141	Iron	Incomp	-	7/16 x 3/16	7/16	NA	NA		1
5	6G2-90	Iron	Incomp	8 3/4 (R)	11/16 x 3/16	13/16	NA	NA		1

TABLE 119

HASP - 9X6

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	MAXIMUM CROSS SECTION	PIVOT HOLE: WIDTH	LOCKING HOLE: WIDTH	QUANTITY
1	6A1-124	Iron	Incomp	5 7/8 (R)	1 9/16 x 1/4	Ind	9/16	1

TABLE 120 | HINGE - 9G6

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	MINIMUM WIDTH	THICKNESS	NUMBER PER SIDE AND DIAMETER OF FASTENING HOLES	COUNTERSINKING	HOLE ARRANGEMENT	T PLATE: LENGTH	MEDIAN: WIDTH	JOINT: LENGTH	SOCKET: INSIDE DIAMETER	QUANTITY
1	6G2-89	Iron	Comp	3 1/2	2 5/8	NA	3/16	3, 5/16	F&B	Offset	NA	NA	NA	NA	1
Ind	6A1-130	Iron	Incomp	3 13/16 (R)	1 3/8	1/16	3/16	4, 3/16	Abs	Triang	NA	NA	NA	NA	1
	Possible Variation 7.														
	6C1-50	Iron	Par	3 5/16 (R)	31/32	9/16	5/32	2, 3/16	Front	-	NA	NA	NA	NA	1
	Possible Variation 7.														
	6D1-129	Iron	Incomp	7 1/2 (R)	1 5/16 (tml)	NA	1/8	4, 1/4	Abs	Stggrd	NA	5/16 (tml)	2 5/8	NA	1
	Possible Variation 8 or 9.														
	6E1-74	Iron	Incomp	8	1 1/4 (tml)	NA	1/16	5, 7/32	Abs	Stggrd	NA	5/16 (tml)	2 1/4	NA	1
	Possible Variation 8 or 9.														
	6E1-75	Iron	Par	7 1/16 (R)	3/4 (R)	NA	1/16	5, 3/16	Front	Stggrd	NA	Ind	1 21/32	NA	1
	Possible Variation 8 or 9.														
	6E2-122	Iron	Incomp	-	1 3/8 (tml)	NA	1/8	2, 3/16	Abs	-	NA	5/16 (tml)	2 7/16	NA	1
	Possible Variation 8 or 9.														
	6H3-73	Iron	Incomp	7 1/8	1 1/8 (tml)	NA	1/16	5, 1/4	Abs	Linear	NA	5/16 (tml)	Ind	NA	1
	Possible Variation 8 or 9.														

TABLE 120 (cont.) | HINGE - 9G6

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	MINIMUM WIDTH	THICKNESS	NUMBER PER SIDE AND DIAMETER OF FASTENING HOLES	COUNTERSINKING	HOLE ARRANGEMENT	T PLATE: LENGTH	MEDIAN: WIDTH	JOINT: LENGTH	SOCKET: INSIDE DIAMETER	QUANTITY
	6J1-45	Iron	Par	9	1 3/8 (tml)	NA	3/32	5, 3/16	Abs	Stggrd	NA	5/16 (tml)	2 11/16	NA	1
	Possible Variation 8 or 9.														
	6K1-71	Iron	Par	7 1/4 (R)	1 7/16 (R)	13/16	1/4	2, 1/4	Front	Ind	NA	NA	NA	Ind	1
	Possible Variation 14.														

TABLE 121 | KEY - 9G6

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	BOW		STEM		PIN		BIT			COLLAR: DIAMETER	QUANTITY
					LENGTH	WIDTH	LENGTH	DIAMETER	LENGTH	DIAMETER	LENGTH	WIDTH	THICKNESS		
3	6F4-96	Iron	Incomp	2 7/16	11/16	1 1/16	-	1/4	NA	NA	Ind	Ind	Ind	NA	1
6	6D2-106	Brass	Frag	Ind	Ind	Ind	Ind	Ind	Ind	Ind	Ind	Ind	Ind	Ind	1
	Consisting only of part of a bow.														
Ind	6D1-187	Iron	Frag	Ind	15/16	1 5/16	Ind	Ind	Ind	Ind	Ind	Ind	Ind	Ind	1
	Possible Variation 1, 2, 3, or 4.														

TABLE 122

LYNCH PIN - 936

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	MAXIMUM WIDTH	MAXIMUM THICKNESS	QUANTITY
1	6D1-136	Iron	Incomp	6 3/4 (R)	1 3/4	1/4	1

Battered at wide end and along one side.

TABLE 123

PADLOCK - 936

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	HOUSING: LENGTH	HOUSING: WIDTH	HOUSING: THICKNESS	PLATE: THICKNESS	BOW: MAXIMUM CROSS SECTION	QUANTITY
Ind	6J1-46	Iron	Par	3	2 7/8	Ind	1/16	Ind	1

Consisting only of a front plate.

TABLE 124 PINTLE - 9G6

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	SHANK: LENGTH	SHANK: MAXIMUM CROSS SECTION	SHANK: WIDTH AT SHOULDER	PIN: LENGTH	PIN: MAXIMUM DIAMETER	WING: MAXIMUM WIDTH	NUMBER AND DIAMETER OF FASTENING HOLES	REINFORCING ARM: LENGTH	REINFORCING ARM: MAXIMUM CROSS SECTION	QUANTITY
2	6G2-88	Iron	Comp	5 5/16	1/2 x 7/16	NA	1 3/16	15/32	NA	NA	NA	NA	1
9	6H1-15	Iron	Comp	6 1/4	3/4 x 3/8	NA	1 13/16	7/16	NA	NA	NA	NA	1

Axis of point is vertical.

Axis of point is horizontal; end of pin is bevelled.

TABLE 125		RIVET - 9G6								
VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	MAXIMUM CROSS SECTION	HEAD: DIAMETER	WASHER: LENGTH AND WIDTH			QUANTITY
2	6A1-121	Iron	Comp	1 13/16	-	NA	13/16 sq.			1
	Bevelled edges on shank.									
	6A1-122	Iron	Comp	2 7/16	-	NA	-			1
	Bevelled edges on shank.									
	6D2-104	Iron	Comp	2 1/2	-	NA	-			1
	Bevelled edges on shank.									
	6E2-125	Iron	Incomp	1 13/16	-	NA	-			1
	Bevelled edges on shank.									
	6F4-92	Iron	Comp	2 1/2	-	NA	-			1
	Bevelled edges on shank.									
Ind	6F1-37	Iron	Frag	2 (R)	9/32	NA	-			1

TABLE 126 | SCREW - 9G6

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY	VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY
1	6D1-185	Iron	Comp	1 1/4	1						
	6F4-95	Iron	Comp	1 3/4	1						
Ind	6E2-121	Iron	Frag	Ind	1						
	Consisting only of a shank section.										
	6G2-87	Iron	Frag	Ind	1						
	Possible Variation 1.										

TABLE 127 — SHEETING - 9G6

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	MAXIMUM REMAINING DIMENSION	QUANTITY
Roof	6A1-123	Iron	Frag	-	P
	6A1-131	Iron	Frag	-	P

TABLE 128 — SHUTTER DOG - 9G6

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	CATCH				ANCHOR		QUANTITY
				LENGTH	LOOP: DIAMETER	MAXIMUM WIDTH	MAXIMUM THICKNESS	LENGTH	MAXIMUM CROSS SECTION	
Ind	6J3-62	Iron	PART Comp	NA	NA	NA	NA	6 3/16	3/8 sq.	1

Consisting only of an anchor; chisel point.

TABLE 129 SLIDING BOLT - 9G6

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	BOLT				PLATE				QUANTITY
				LENGTH	MAXIMUM CROSS SECTION	HANDLE: DIAMETER	HANDLE: HEIGHT	LENGTH	WIDTH	THICKNESS	NUMBER AND DIAMETER OF FASTENING HOLES	
6	6A1-125	Iron	PART Incomp	NA	NA	NA	NA	7 1/8	1 3/4	1/16	4, 1/4	1

Consisting only of an incomplete back plate.

TABLE 130 STAPLE - 9G6

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	INSIDE WIDTH	BAR: MAXIMUM CROSS SECTION	SHOULDER HEIGHT	PLATE: LENGTH	PLATE: WIDTH	PLATE: THICKNESS	QUANTITY
5	6J2-60	Iron	Incomp	3	13/16	3/8 x 5/16	NA	NA	NA	NA	1
11	6K1-70	Iron	Comp	2 1/4	3/8	7/16 x 3/16	3/8	NA	NA	NA	1
Ind	6C1-53	Iron	Incomp	2 1/16 (R)	1 3/8	1/2 x 3/16	NA	NA	NA	NA	1
	Possible Variation 8.										
	6G1-84	Iron	Incomp	2 1/8 (R)	11/16	3/16 sq.	NA	NA	NA	NA	1

TABLE 131 THUMB LATCH, CATCH - 9G6

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	HOOK		REINFORCING SHANK		PLATE		NUMBER AND DIAMETER OF FASTENING HOLES	QUANTITY
						LENGTH	HEIGHT	LENGTH	DISTANCE FROM HOOK	LENGTH	WIDTH		
1	6E2-139	Iron	Comp	3 3/8	1/4 x 3/16	13/16	3/8	NA	NA	NA	NA	NA	1
	Axis of point is horizontal.												
2	6D1-128	Iron	Comp	2 7/8	1/4 x 3/16	5/8	5/32	NA	NA	NA	NA	NA	1
	6D2-	Iron	Comp	3 3/16	11/32 x 1/4	3/4	5/16	NA	NA	NA	NA	NA	1

TABLE 132 THUMB LATCH, GUIDE - 9G6

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	THICKNESS	STAPLE		HOLE: DIAMETER	COUNTERSINKING	QUANTITY
							INSIDE WIDTH	INSIDE HEIGHT			
1	6A1-127	Iron	Comp	3 7/8	11/16	3/16	1 5/8	3/8	5/16	Abs	1
	Two rivet fragments in place.										
2	6D2-105	Iron	Incomp	3 1/4 (R)	3/4	1/8	1 9/16	3/16	1/4	Front	1

TABLE 133 — THUMB LATCH, LIFT BAR - 9G6

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	THUMB PRESS: DIAMETER	THUMB PRESS: THICKNESS		QUANTITY
1	6F1-40	Iron	Incomp	4 3/16 (R)	9/16 x 3/16	1 5/16	1/8		1
	Broad arrow stamped on upper surface of thumb press.								
2	6F2-64	Iron	Incomp	-	5/16 x 1/8	1 1/8	-		1

TABLE 134 — WASHER - 9G6

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH AND WIDTH or DIAMETER	THICKNESS	HOLE: DIAMETER or LENGTH AND WIDTH	FASTENING HOLE: DIAMETER		QUANTITY
6	6F1-38	Iron	Comp	1 1/2	3/32	1/2	NA		1

TABLE 135 NAIL DISTRIBUTION (Variation and Length) – 966

Length \ Variation	A1	A2	A3	A4	A5	A6	A10	A11	A13	A15	A16	A17	A18	A19	A20	A21	A22	A23	A24
3/4																			
1																			
1/4		1																	
		2																	
1/2		7		1														1	
		4		1															
3/4		11		1															
		18									1							1	
2		14		2	1				1										
		16		5	2														
1/4		14		1	3			1											
		13		4	2											1			1
1/2		16		3	2														
		11		3	1													1	
3/4		8		3	1														
		9		4	1			2											
3		20		3				1	1							2			
		29		2	2						1					3			
1/4		30		1	1			1								1		1	
		29		1	2											1			
1/2		41		1	3														
		25	1	2	1			1											
3/4		15	2		3														
		10	1	1				1								1			
4		17	3	1	1														1
		11	1	1	3							1					1		
1/4		11	2	3	1														
		10	4	2															
1/2		12	5	1									1						
		7	6	1										1					
3/4		3	4	1	1														
		5	5	1	1														
5		3	2													1			
		4																	
1/4		3																	
		2	1																
1/2		3	2	1															
		1																	
3/4																			
6																			
1/4																			
1/2																			
3/4																			
7																			
1/4																			
1/2				1															
3/4																			
8																			
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate																			
TOTAL	376	435	38	52	32	886	1	7	2	7	2	1	1	1	6	9	1	4	2

TABLE 135 (cont.) NAIL DISTRIBUTION (Variation and Length) – 9G6

Length \ Variation	A25	A26	A28	A29	A30	A31	A32	A34	A36	A40	A41	A42	A44	A45	A47	A49	A52	A55	A58
3/4																			
1									2					1					
1/4		4				1			2			1			1				
1/2		4							5						1			1	
3/4		4							2										
2		10	1	1					1			1							
1/4		2	1						1										
1/2		2					1												
3/4		1															1		
3		1																	
1/4		1						1		1									
1/2		1																	
3/4																			
4																			
1/4																			
1/2																			
3/4																			
5																			
1/4																			
1/2																			
3/4																			
6																			
1/4																			
1/2																			
3/4																			
7																			
1/4																			
1/2																			
3/4																			
8																			
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate													1						
TOTAL	11	30	3	1	19	1	1	1	13	1	2	2	1	1	2	1	1	1	1

TABLE 135 (cont.) NAIL DISTRIBUTION (Variation and Length) – 966

Length \ Variation	A59	A60	A61	A62	A63	A68	A69	A70	A72	A77	A78	A79	A81	A90	A92	A93	A94	A95	A96
3/4																			
1																			
1/4	1														1				
1/2	1														1	1			
3/4	1			1															
2	1														1				
1/4																1			
1/2	1																		1
3/4															1				
3			1																
1/4															2				
1/2		1																	
3/4		1						1				1						1	
4		1								1	1								1
1/4								1							1				1
1/2	1	1				1					1	1						1	4
3/4							1				3	1			1			5	
5							1				1							3	
1/4		1					3	1			2							8	
1/2							1	1			1							1	
3/4							1				1								1
6																			
1/4																			1
1/2																		1	
3/4							1												1
7																			
1/4		1																	
1/2							1												
3/4																			
8																			
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate																			
TOTAL	6	6	1	1	8	1	10	4	18	1	12	3	18	1	8	2	29	25	6

TABLE 135 (cont.) NAIL DISTRIBUTION (Variation and Length) — 966

Length \ Variation	A97	A102	A114	A115	A117	A118	B1	B3	B4	B6	B8	B10	C2	D1	D4	TOTAL
3/4																
1										1						2
1/4										2						6
1/2			1					1		2						11
3/4			2		1					4						17
2			1							1						27
1/4										2						12
1/2										1				1		21
3/4				1						2		1	1			27
3		1			1					2			1			22
1/4										4						25
1/2										2						21
3/4										1						43
4			1							1						39
1/4			1	1												36
1/2																46
3/4																35
5																20
1/4																16
1/2																27
3/4																20
6										1						18
1/4																23
1/2																28
3/4																23
7																19
1/4																14
1/2													1			9
3/4																9
8																7
1/4																8
1/2																7
3/4																1
9																
1/4																
1/2																
3/4																
10.										1						1
1/4																
1/2																
3/4																
11																
1/4																
1/2																
3/4																
1																1
1/4																
1/2																1
3/4																1
2																1
1/4																
1/2																2
3/4																
8																
1/4																
1/2																
3/4																
9																
1/4																
1/2																
3/4																
10.																
1/4																
1/2																
3/4																
11																
1/4																
1/2																
3/4																
Indeterminate		1														1
TOTAL	12	1	7	2	2	27	13	1	1	28	31	1	5	1	2	

North Blockhouse (9G7; Fig. 48: structure 7)

Initial construction was during period I, possibly as early as 1779. A sketch of the fort in 1788, however, no longer shows a building in this area. The blockhouse was probably reconstructed in 1813. By 1823 it was reported to be in a deteriorated condition and a plan of 1834 no longer shows a building in the area. A building of a different shape appears on a plan of 1838. Plans of the 1850's again do not show a building here although they show a shed near the base of the platform on which the blockhouse had been built.

Only a relatively small number of artifacts are present (Tables 136-144), except for the nails (Table 145). The one hinge of variation 13 (Table 140) is probably not building hardware because of its small size. The absence of cast hinges and presence of only one screw may be significant. The relatively high frequency of cut nails (19.6 per cent; Table 29), is not consistent with construction during period I nor with the possible reconstruction during or after 1813. It may, however, reflect the building erected between 1834 and 1838.

TABLE 136				BOLT - 9G7				
VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	THREAD: DIAMETER		QUANTITY
3	7A2-209	Iron	Comp	4 5/8	1/2	5/8		1
	NUT: Variation 1; 1 5/16" sq. x 3/8".							
8	7E1-65	Iron	Comp	13 1/4	5/8	5/8		1
	NUT: Variation 1; 1 1/4" sq. x 23/32".							
Ind	7E1-64	Iron	Incomp	-	9/16	-		1
	Possible Variation 3.							
	7E1-66	Iron	Incomp	-	5/8	5/8		1
	NUT: Variation 1; 1 5/16" sq. x 3/4"; corners bevelled. Bolt possible Variation 8.							
	7E1-83	Iron	Incomp	-	1/2	1/2		1
	NUT: Variation 1; 1 5/16" sq. x 5/16". Bolt possible Variation 1, 3, 4, or 6.							

TABLE 137

NUT - 9G7

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH AND WIDTH or DIAMETER	THICKNESS	HOLE: DIAMETER	QUANTITY
1	7G2-109	Iron	Comp	1 5/8 sq.	5/8	9/16	1

TABLE 138

DOOR LOCK, LOCK BOLT - 9G7

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY
1	7K1-18	Iron	Incomp	5 9/16	1

TABLE 139

GATE HOOK - 9G7

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	HOOK: LENGTH	EYE: INSIDE DIAMETER	QUANTITY
6	7J1-95	Iron	Comp	3 3/16	5/32	15/16	-	1

With swinging eye; length 1 3/4"; shank diameter 5/32".

TABLE 140 | HINGE - 9C7

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	MINIMUM WIDTH	THICKNESS	NUMBER PER SIDE AND DIAMETER OF FASTENING HOLES	COUNTERSINKING	HOLE ARRANGEMENT	T PLATE: LENGTH	MEDIAN: WIDTH	JOINT: LENGTH	SOCKET: INSIDE DIAMETER	QUANTITY
12	7A1-181	Brass	Comp	1 1/2	7/8	NA	1/16	2, 7/32 & 5/32	?	NA	NA	NA	NA	NA	1
	Two screws in one side (large hole); Variation 1, length 5/8" and two wrought nails in other side.														
18	7E1-63	Iron	Incomp	6 15/16 (R)	1 (R)	7/16	1/8	3, 7/32 & 3/16	Abs	Linear	NA	NA	NA	Ind	1
Ind	7A1-180	Iron	Frag	4 5/8 (R)	1 3/8 (R)	13/16 (R)	1/8	4, 3/16	Abs	Linear	NA	NA	NA	Ind	1
	Possible Variation 7.														
	7B2-247	Iron	Comp	6 9/16	1 1/8	7/16	1/8	3, 3/16 & 3/32	Abs	Linear	NA	NA	NA	NA	1
	Possible Variation 7.														
	7F2-125	Iron	Incomp	5 (R)	1 5/16 (R)	3/16	1/8	2, Ind	Abs	Ind	NA	NA	NA	NA	1
	Bent almost at right angles near the joint; possible Variation 7.														

TABLE 141 KEY - 9G7

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	BOW		STEM		PIN		BIT			COLLAR:	QUANTITY
				LENGTH	WIDTH	LENGTH	DIAMETER	LENGTH	DIAMETER	LENGTH	WIDTH	THICKNESS	DIAMETER	
3	7A1-179	Iron	Incomp	11/16	13/16	1 1/2	1/4	NA	NA	9/32	Ind	Ind	NA	1
5	7F2-124	Iron	Incomp	3/4	1 3/16	Ind	1/8	NA	NA	Ind	Ind	Ind	NA	1

TABLE 142 PINTLE - 9G7

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	SHANK		PIN		WING: MAXIMUM WIDTH	NUMBER AND DIAMETER OF FASTENING HOLES	REINFORCING ARM		QUANTITY
				LENGTH	MAXIMUM CROSS SECTION	WIDTH AT SHOULDER	LENGTH	MAXIMUM DIAMETER		LENGTH	MAXIMUM CROSS SECTION	
Ind	7E1-62	Iron	Incomp	3 5/8 (R)	15/16 x 5/32	NA	1 13/16	7/16	NA	NA	NA	1

Fastening holes countersunk on one surface. Possible Variation 12 or 13.

TABLE 143 SCREW - 9G7

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY	VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY
1	7B1-169	Iron	Comp	1 1/2	1						

TABLE 144 STAPLE - 9G7

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	INSIDE WIDTH	BAR: MAXIMUM CROSS SECTION	SHOULDER HEIGHT	PLATE			QUANTITY
								LENGTH	WIDTH	THICKNESS	
8	7F2-123	Iron	Incomp	2 7/8	1 1/2	1/2 x 1/8	NA	NA	NA	NA	1
	7G2-110	Iron	Incomp	2 3/4	1 7/8	1/2 x 3/16	NA	NA	NA	NA	1
	7G2-111	Iron	Incomp	2 11/16	2 1/8	15/32 x 5/32	NA	NA	NA	NA	1
10	7F2-122	Iron	Comp	3 1/8	3 3/8	7/8 x 1/8	11/16	NA	NA	NA	1

TABLE 145 NAIL DISTRIBUTION (Variation and Length) – 967

Length \ Variation	A1	A2	A3	A4	A5	A6	A11	A12	A13	A15	A26	A28	A29	A30	A33	A35	A60	A61	A63
3/4																			
1													1						
1/4				1							1	1	4						
1/2		3									1	1	2						
3/4		1		1															
		2		3			1						1						
		3		3	1						1								
2		3		3							1								
		3		3	1				1			2							
1/4		5		11	2				1		1	2							
		2		3	2														
1/2		3		5	2				1		1								
				3	1														
3/4		1		6	6													1	
		3		4	3														
		4		5	3		1					1			1				
3		4		11	2		1		1										
		2		8	5														
1/4		2		7	3		2												
		1		9															
1/2		2	1	8	4													1	
		2		6	3														
3/4		2		7	3														
		2		3	4														
4		1	1		8														
				3	2														
1/4		1		5	2				1										
			1	1	1														
1/2		1	1	8							1								
				2	2														
3/4			1	4	1														
			2	7	1														
5		2	2	3	1														
		2	2	1															
1/4					1			1									1		
1/2		1	2		1														
				1															
3/4				1	1														
				1	1														
6																			
1/4																			
1/2																			
3/4				1															
7																			
1/4																			
1/2			1	1															
3/4																			
8			1																
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
indeterminate																			
TOTAL	295	58	15	149	67	343	5	1	5	2	7	7	8	6		1	2	2	9

TABLE 145 (cont.) NAIL DISTRIBUTION (Variation and Length) – 967

Length \ Variation	A69	A70	A72	A75	A77	A78	A79	A80	A81	A86	A92	A93	A94	A95	A96	A99	A109	A112	A114
3/4																			
1																			
1/4																			
1/2															1				
3/4																			
2																			
1/4											1	1			1				
1/2											2	1			1				
3/4															2				
3							1								1				
1/4						1						1							
1/2															1				
3/4										1		1				1			
4					1		1					1			2				
1/4						1					1				2				
1/2						1	3					1		1	1				
3/4						1	3							3	5				
5						2								3	2				
1/4	1					1	1							2	1				
1/2	1					1	2							1	1				
3/4						1								2					
6																			
1/4																			
1/2																			
3/4																			
7																			
1/4																			
1/2																			
3/4																			
8																			
1/4																			
1/2																			
3/4								1											
9																			
1/4																			
1/2																			
3/4		1																	
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate																			2
TOTAL	2	1	6	1	1	11	11	1	15	1	4	7	19	12	26	1	1	1	2

TABLE 145 (cont.) NAIL DISTRIBUTION (Variation and Length) – 9G7

Length \ Variation	A115	A117	A118	B1	B5	B6	B7	B8	TOTAL
3/4									
1						1			2
1/4					1	1			8
1/2						4			12
3/4						14			16
2						2	1		11
1/4									8
1/2						2			9
3/4						3			13
3						2			25
1/4						3			13
1/2						2			19
3/4						2			7
4									17
1/4									10
1/2						4			20
3/4						8			28
5						10			25
1/4						4			20
1/2						1			11
3/4									17
6									13
1/4						2			16
1/2						3			15
3/4						3			17
7						3			10
1/4									11
1/2									13
3/4									15
8									13
1/4									11
1/2									13
3/4									10
9									7
1/4									7
1/2									5
3/4									1
10									1
1/4									2
1/2									2
3/4									
11									
1/4									
1/2									
3/4		1				1			2
Indeterminate	2								4
TOTAL	2	1	7	35	1	75	1	123	

South Blockhouse (9G8; Fig. 48: structure 8)

Construction was during period I, possibly as early as 1779. In 1823 it was reported to be in a deteriorated condition and it is not shown on an 1834 plan. Plans of the 1850's show a small building, possibly a privy, on the platform on which the blockhouse had been built.

Again as for the North Blockhouse only a small number of artifacts are present (Tables 147-155) including less than half the total nails for the North Blockhouse. The absence of closure hardware, except for one possible gate hook, and a lack of hinges suggests the possibility of hardware salvage. The frequency of wrought nails (95.0 per cent; Table 29) is consistent with construction during period I and reflects the difference in history between this building and the North Blockhouse.

TABLE 146

BOLT - 9G8

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	THREAD: DIAMETER	QUANTITY
3	8I16-17	Iron	Incomp	1 15/16 (R)	7/16	NA	1
Ind	8G12-6	Iron	Frag	Ind	Ind	3/8	1

Consisting only of a thread section.

TABLE 147

EYE - 9G8

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	EYE: INSIDE DIAMETER	THREAD: DIAMETER	WASHER: LENGTH AND WIDTH	QUANTITY
6	8R1-47	Iron	Incomp	2 3/4 (R)	1/4 x 3/16	7/32	NA	NA	1

TABLE 148 GATE HOOK - 9G8

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	HOOK: LENGTH	EYE: INSIDE DIAMETER	QUANTITY
5	8E5-13	Iron	Incomp	4 13/16 (R)	5/16	1 11/16	Ind	1

TABLE 149 HINGE - 9G8

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	MINIMUM WIDTH	THICKNESS	NUMBER PER SIDE AND DIAMETER OF FASTENING HOLES	COUNTERSINKING	HOLE ARRANGEMENT	T PLATE: LENGTH	MEDIAN: WIDTH	JOINT: LENGTH	SOCKET: INSIDE DIAMETER	QUANTITY
2	8C5-7	Iron	Incomp	2 3/16	15/16 (tml)	NA	1/8	3, 1/4	Front	Linear	NA	NA	NA	NA	1
Ind	8C4-21	Iron	Incomp	4 1/16 (R)	3/4 (R)	1/4	3/32	2, 3/16	Abs	Ind	NA	NA	NA	NA	1
Possible Variation 7.															
	8C5-8	Iron	Incomp	4 5/8 (R)	1 5/16	19/32 (R)	1/8 - 1/16	3 & 1, 5/32-1/4	Abs	Triang	NA	NA	NA	NA	1
Consisting of parts of both sides with the one considerably longer than the other. Possible Variation 7.															

TABLE 150 — KEY - SG8

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	BOW: LENGTH	BOW: WIDTH	STEM: LENGTH	STEM: DIAMETER	PIN: LENGTH	PIN: DIAMETER	BIT: LENGTH	BIT: WIDTH	BIT: THICKNESS	COLLAR: DIAMETER	QUANTITY
1	SG16-46	Iron	Comp	5 1/4	1 3/8	1 15/16	2 3/4	3/8	1 1/16	1/4	7/8	1	1/4	3/8	1

TABLE 151 — PADLOCK - SG8

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	HOUSING: LENGTH	HOUSING: WIDTH	HOUSING: THICKNESS	PLATE: THICKNESS	BOW: MAXIMUM CROSS SECTION	QUANTITY
1	SG3-6	Iron	Comp	2 13/16	2 7/8	7/8	1/16	5/16	1

TABLE 152 PINTLE - 9G8

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	SHANK			PIN		WING: MAXIMUM WIDTH	NUMBER AND DIAMETER OF FASTENING HOLES	REINFORCING ARM		QUANTITY
				LENGTH	MAXIMUM CROSS SECTION	WIDTH AT SHOULDER	LENGTH	MAXIMUM DIAMETER			LENGTH	MAXIMUM CROSS SECTION	
12	8C4-23	Iron	Comp	6	7/8 x 3/16	NA	1 13/16	3/8	NA	3, 3/8	NA	NA	1
13	8C4-22	Iron	Comp	8 5/16	11/16 x 3/16	NA	1 7/16	5/16	NA	5, 9/32 - 3/8	NA	NA	1

TABLE 153

STAPLE - 9G8

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	INSIDE WIDTH	BAR: MAXIMUM CROSS SECTION	SHOULDER HEIGHT	PLATE LENGTH	PLATE WIDTH	PLATE THICKNESS	QUANTITY
Ind	8F1-6	Iron	Incomp	2 7/8 (R)	5/8	3/8	NA	NA	NA	NA	1

TABLE 154

WASHER - 9G8

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH AND WIDTH OR DIAMETER	THICKNESS	HOLE: LENGTH AND WIDTH OR DIAMETER	FASTENING HOLE: DIAMETER	QUANTITY
1	8G6-25	Iron	Comp	3 1/4	5/16	1 5/16	NA	1

TABLE 155 NAIL DISTRIBUTION (Variation and Length) – 9G8

Length \ Variation	A1	A2	A3	A4	A5	A6	A15	A28	A29	A30	A31	A60	A61	A62	A63	A65	A70	A72	A78
3/4																			
1																			
1/4								1			1								
1/2		1		1	1			1	2				1						
3/4				2	1			1	1										
2		3		2	1														
1/4		1		3	2														
1/2		2		1	2														
3/4		1		1	1									1					
3		1		2	2														
1/4		1		5	1														
1/2		3		3	2														
3/4		2		6	2											1			
4		1		3	2														
1/4	1		1	2	1														
1/2		1		3	2														
3/4			1	5	1														
5				1	2														1
1/4			1	3	1							1							1
1/2			2	2	2														
3/4		1	2	1													1		
6				1															
1/4				1	1														
1/2					1														
3/4																			
7																			
1/4																			
1/2																			
3/4																			
8																			
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate																			
TOTAL	84	18	7	63	31	139	4	2	3	5	1	1	1	1	2	1	1	1	2

TABLE 155 (cont.) NAIL DISTRIBUTION (Variation and Length) — 9G8

Length \ Variation	A79	A81	A92	A93	A94	A95	A96	A112	B6	B7	B8	C2	TOTAL
3/4													
1													
1/4													2
1/2									1				5
3/4													3
2							1						1
1/4			1				1						4
1/2			1										2
3/4			1										7
3							1		1				3
1/4				2									5
1/2													3
3/4							1						3
4										1		2	3
1/4						1			1			1	5
1/2	1												7
3/4						1							4
5							1						5
1/4	1												4
1/2	1												5
3/4													6
6													2
1/4													2
1/2													1
3/4													2
7													1
1/4													1
1/2													1
3/4													
8													
1/4													
1/2													
3/4													
9													
1/4													
1/2													
3/4													
10													
1/4													
1/2													
3/4													
11													
1/4													
1/2													
3/4													
Indeterminate													
TOTAL	3	1	3	2	6	2	5	3	3	1	9	3	

Hospital (9G9; Fig. 48: structure 9)

The hospital appears to have been a building from period I which was converted to use as a hospital during the War of 1812. By the end of 1815 it was no longer suitable for use as a hospital and the building does not appear on plans after 1823.

Construction during period I is suggested by several of the artifacts. Only one hinge is cast whereas three, out of a total of seven, are of the general H-HL form (Table 162). The door-lock tumbler variation 1 (Table 159) is also assumed to represent an early context since it appears only in areas of period I and has been characterized as late 18th century (Noël Hume 1970: Fig. 77a 8). The scarcity of cast hinges is also reflected by the small number of screws (Table 166). Wrought nails predominate (97.6 per cent; Table 29), as could be expected during the early period.

TABLE 156 | BOLT - 9G9

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	THREAD: DIAMETER		QUANTITY
7	9K1-13	Iron	Comp	3 5/8	3/4	11/16		1
	Head Diameter: 2 3/8"; thread tapers slightly.							
9	9B1-97	Iron	Comp	4 1/4	5/16	5/16		1
	Head slightly offset.							
10	9M1-27	Iron	Comp	2	7/32	7/32		1
	Nut: Variation 4; Washer: Variation 4.							
	9AA1-78	Iron	Incomp	1 15/16 (R)	7/32	7/32		1
Ind	9A1-62	Iron	Frag	Ind	1/2	Ind		1
	Possible Variation 1. Head may have been manufactured with a bar wrapped around end of the shank.							
	9C1-97	Iron	Comp	4 1/8	13/32	15/32		1
	Possible Variation 4. Head is oval in plan view.							

TABLE 157 CLEVIS PIN - 9G9

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	DIAMETER	HOLE: LENGTH AND WIDTH		QUANTITY
1	9D4-6	Iron	Comp	14 1/16	9/16	-		1

TABLE 158 DOOR LOCK - 9G9

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	HOUSING: LENGTH	HOUSING: MAXIMUM WIDTH	HOUSING: MINIMUM WIDTH	HOUSING: PLATE: THICKNESS		QUANTITY
1	9C2-	Iron	PART Comp	NA	NA	NA	NA		1
	Consisting only of a latch bolt; length 6 1/4".								
	9K2-4	Iron	PART Comp	NA	NA	NA	NA		1
	Consisting only of a lock bolt; length 6 1/4".								
Ind	9K6-53	Iron	PART Incomp	NA	NA	NA	NA		1
	Consisting only of an incomplete lock bolt; possible Variation 1, 2, or 3.								

TABLE 159 DOOR LOCK, TUMBLER - 9G9

VARIATION *	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	LOOP: LENGTH AND WIDTH	QUANTITY
1	9K2-20	Iron	Comp	4 1/4	2 1/4 x 1 5/16	1

TABLE 160 EYE - 9G9

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	EYE: INSIDE DIAMETER	THREAD: DIAMETER	WASHER: LENGTH AND WIDTH	QUANTITY
3	9B1-83	Iron	Incomp	-	1/4 sq.	1/2	NA	NA	1
7	9D3-24	Iron	Incomp	-	3/8	9/16	NA	NA	1

TABLE 161				GATE HOOK - 9G9					
VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	HOOK: LENGTH	EYE: INSIDE DIAMETER		QUANTITY
Ind	9L1-50	Iron	Par	1 1/16 (R)	13/32 x 1/4	1 7/8	Ind		1
Possible Variation 1.									

TABLE 162 | HINGE - 9G9

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	MINIMUM WIDTH	THICKNESS	NUMBER PER SIDE AND DIAMETER OF FASTENING HOLES	COUNTERSINKING	HOLE ARRANGEMENT	T PLATE: LENGTH	MEDIAN: WIDTH	JOINT: LENGTH	SOCKET: INSIDE DIAMETER	QUANTITY
1	9K7-136	Iron	Incomp	1 15/16	1 1/16	NA	1/16	Ind	Ind	Ind	NA	NA	NA	NA	1
11	9D1-115	Iron	Incomp	2 15/16 (tml)	1 5/8	1 3/8	1/16 - 3/16	5, 3/16	-	-	NA	NA	NA	NA	1
	Bent at right angles near the joint.														
Ind	9C1-98	Iron	Incomp	9 1/16	1 5/16 (tml)	NA	1/16	5, 1/4	Abs	Linear	NA	5/16 (tml)	2 9/16	NA	1
	Possible Variation 8 or 9.														
	9D1-77	Iron	Frag	4 1/4 (R)	1 1/32 (R)	3/4	1/8	2, 1/4	Front	Ind	NA	NA	NA	NA	1
	Possible Variation 16.														
	9K7-143	Iron	Incomp	6 1/2	1 1/16 (tml)	NA	1/8	5, 5/32	Abs	Linear	NA	3/16 (tml)	2 1/8	NA	1
	Possible Variation 8 or 9. One unidentified fastening in place; shank: squared.														
	9T2-10	Iron	Incomp	8 1/8	1 5/16 (tml)	NA	1/8	5, 3/16 - 1/4	Front	Linear	NA	3/8 (tml)	2 1/2	NA	1
	Possible Variation 8 or 9.														

TABLE 163 KEY - 9G9

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	BOW		STEM		PIN		BIT			COLLAR: DIAMETER	QUANTITY
					LENGTH	WIDTH	LENGTH	DIAMETER	LENGTH	DIAMETER	LENGTH	WIDTH	THICKNESS		
3	9J4-10	Iron	Incomp	-	Ind	Ind	-	1/4	NA	NA	7/16	3/8	5/32	NA	1
5	9S7-4	Iron	Incomp	1 13/16	11/16	1 1/16	1 1/8	5/16	NA	NA	Ind	5/16	1/8	NA	1

Stem tapers toward the bow.

TABLE 164 PADLOCK - 9G9

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	HOUSING				BOW: MAXIMUM CROSS SECTION		QUANTITY
				LENGTH	WIDTH	THICKNESS	PLATE: THICKNESS			
4	9G1-26	Iron	PART Comp	Ind	Ind	Ind	Ind	1/4		1

Consisting only of a bow.

TABLE 165 | PINTLE - 9G9

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	SHANK			PIN		WING:		REINFORCING ARM		QUANTITY
				LENGTH	MAXIMUM CROSS SECTION	WIDTH AT SHOULDER	LENGTH	MAXIMUM DIAMETER	MAXIMUM WIDTH	NUMBER AND DIAMETER OF FASTENING HOLES	LENGTH	MAXIMUM CROSS SECTION	
2	9B2-14	Iron	Comp	2 1/8	5/16 x 3/32	NA	13/16	1/4	NA	NA	NA	NA	1
	Shank clinched 1 11/32" from pin; axis of point is horizontal.												
	9M1-14	Iron	Comp	5 1/8	1/2 x 11/32	NA	1 1/16	1/2	NA	NA	NA	NA	1
	Axis of point is vertical												
9	9B1-81	Iron	Comp	3 1/2	5/8 x 7/16	NA	1 9/16	1/2	NA	NA	NA	NA	1
	Axis of point is vertical; end of pin bevelled.												
	9B1-82	Iron	Comp	3 7/16	5/8 x 3/8	NA	1 7/8	1/2	NA	NA	NA	NA	1
	Axis of point is vertical; end of pin bevelled.												
	9P1-	Iron	Comp	4 3/16	5/8 x 3/8	NA	1 1/2	1/2	NA	NA	NA	NA	1
	Axis of point is vertical; end of pin bevelled.												

TABLE 166

SCREW - 9G9

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY	VARIATION	PROVENIENCE	QUANTITY
1	9C2-60	Iron	Comp	2 1/2	1			
Ind	9E1-31	Iron	Frag	Ind	1			

Possible Variation 1.

TABLE 167

SHUTTER DOG - 9G9

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	CATCH				ANCHOR		QUANTITY
				LENGTH	LOOP: DIAMETER	MAXIMUM WIDTH	MAXIMUM THICKNESS	LENGTH	MAXIMUM CROSS SECTION	
Ind	9K2-5	Iron	Par	3 (R)	1 7/8	-	5/16	Ind	Ind	1

Possible Variation 1.

TABLE 168 — SLIDING BOLT - 9G9

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	BOLT				PLATE			
				LENGTH	MAXIMUM CROSS SECTION	HANDLE		LENGTH	WIDTH	THICKNESS	NUMBER AND DIAMETER OF FASTENING HOLES
						DIAMETER	HEIGHT				
Ind	9H2-	Iron	Par	-	7/16 x 1/4	Ind	Ind	Ind	Ind	Ind	Ind
											QUANTITY 1

Consisting only of part of a bolt; possibly Variation 3.

TABLE 169 — STAPLE - 9G9

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	INSIDE WIDTH	BAR: MAXIMUM CROSS SECTION	SHOULDER HEIGHT	PLATE		
								LENGTH	WIDTH	THICKNESS
10	9R1-11	Iron	Par	2 15/16	Ind	7/16 x 1/8	1/2	NA	NA	NA
										QUANTITY 1

TABLE 170 THUMB LATCH, BAR - 9G9

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	MAXIMUM WIDTH	MINIMUM WIDTH	THICKNESS	PIVOT END			HANDLE		QUANTITY
								WIDTH	THICKNESS	HOLE: DIAMETER	LENGTH	DIAMETER	
Ind	9G1-	Iron	Incomp	6 7/8 (R)	5/8	-	7/32	Ind	Ind	Ind	NA	NA	1

Possible Variation 1 or 2.

TABLE 171 THUMB LATCH, CATCH - 9G9

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	HOOK		REINFORCING SHANK		PLATE		NUMBER AND DIAMETER OF FASTENING HOLES	QUANTITY
						LENGTH	HEIGHT	LENGTH	DISTANCE FROM HOOK	LENGTH	WIDTH		
2	9K6-52	Iron	Comp	4 1/2	13/32 x 11/32	1 1/8	5/8	NA	NA	NA	NA	NA	1

TABLE 172				WASHER - 9G9					
VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH AND WIDTH or DIAMETER	THICKNESS	HOLE: DIAMETER or LENGTH AND WIDTH	FASTENING HOLE: DIAMETER		QUANTITY
1	9C3-22	Iron	Comp	1 7/8	1/4	15/16	NA		1
	9AA1-79	Iron	Comp	1 5/8	3/16	3/4	NA		1

TABLE 173 NAIL DISTRIBUTION (Variation and Length) – 969

Length \ Variation	A1	A2	A3	A4	A5	A6	A11	A13	A14	A15	A23	A24	A26	A28	A29	A30	A33	A36	A59
3/4				1															
1													1	1					
1/4				5									1	3					
1/2		4		4	1			3					6	1	2				
3/4		2		3	3								6	1	1				
2		1		9	2		2							2	2			1	
1/4		5		12	3				1				3	5					
1/2		6	1	5				1					6						
3/4		6		15			1						1	2			1		
3		3		13	1		1	1											
1/4		1		10	2									1					
1/2		3		11			1								1				
3/4		1		10										1					
4		4	1	5											1				
1/4		3		9	3			1											1
1/2		3		7	2			1											
3/4		1		13			1	1											
5		4	1	14	2			1				1		1					
1/4		3		23	4		1				1								
1/2		4		18	6														
3/4		3		12	3														1
5		1		16	2														
1/4			3	10	2														
1/2			3	15	2														
3/4			1	10	4												1		
6			1	16	5														
1/4				22	4														
1/2			3	25	3														
3/4			3	12	6														
7			4	13	2														
1/4			1	12	1														
1/2			1	6															
3/4				10															
8		1		4	1														
1/4				1	1														
1/2		2		1	1														
3/4				1															
9				1	1														
1/4				2	1														
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
indeterminate																			
TOTAL	290	57	21	379	68	582	7	9	1	5	1	1	24	18	7	24	2	1	2

TABLE 173 (cont.) NAIL DISTRIBUTION (Variation and Length) – 969

Length \ Variation	A61	A62	A63	A69	A70	A71	A72	A78	A79	A80	A81	A92	A93	A94	A95	A96	A114	A115	A118
3/4																			
1																			
1/4		1																	
1/2																			
3/4																		1	
2												1				2			
1/4	1															2			
1/2																1			
3/4													1			?			
3													1						
1/4												1							
1/2																			
3/4												1							
4									1										
1/4																	1		
1/2								1	2						1	1			
3/4								4	3						3	3			
5				1	1	1		3	2	1					4	1			
1/4				3	1			2	2						5	1			
1/2				1	1				1						1	1			
3/4				1	1				1						1	1			
6								1							1				
1/4									1										
1/2																			
3/4									1										
7	1																		
1/4																			
1/2																			
3/4									1										
8																			
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate																			
TOTAL	2	1	9	10	5	1	5	12	15	1	16	3	2	25	21	15	1	1	3

TABLE 173 (cont.) NAIL DISTRIBUTION (Variation and Length) – 969

Length \ Variation	B3	B6	B7	B8	D1	TOTAL
3/4						1
1		1				3
1/4						10
1/2			1			17
3/4						19
2						21
1/4						25
1/2		1			1	20
3/4						27
3			1			22
1/4	1	2				19
1/2		2	1			15
3/4						14
4						8
1/4						16
1/2						11
3/4						21
5						24
1/4						36
1/2						30
3/4						20
6						22
1/4						13
1/2						18
3/4						16
7						22
1/4						29
1/2						36
3/4						35
8						27
1/4						25
1/2						13
3/4						16
9						13
1/4						4
1/2						7
3/4						8
10						5
1/4						2
1/2						4
3/4						1
11						1
1/4						
1/2						
3/4						
						1
						1
						1
Indeterminate						
TOTAL	1	6	3	22	1	

Cloverleaf Bastion (9G10, 9G44, 9G45, 9G47, 9G48, 9G57; Fig. 48: structure 10)

All of the operations represent some part of the bastion which consisted of earth ramparts and three gun platforms. The ramparts were constructed during 1813-14 and the gun platforms may have been constructed at the same time or during 1837-38.

Except for the nails, no operation has more than five artifacts (Tables 174, 176-179, 181, 182, 185, 187). The presence of an almost complete thumb-latch handle in 9G44 is probably an intrusion from some other building. The nails (Tables 175, 180, 183, 184, 186, 188) do not reflect any great quantity of construction in the area nor is the construction of gun platforms reflected by the presence of long nails which would be required for the heavier timbers of such a structure. The nails are in a marked contrast with nails found in other gun platforms at the site.

TABLE 174	BOLT - 9G10							
VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	THREAD: DIAMETER		QUANTITY
11	10A1-4	Iron	Comp	8 7/16	3/8	-		1
	NUT: Variation 1; 1 5/8" sq. x 5/16". WASHER: Variation 1; diameter 1".							
	10H1-17	Iron	Comp	4 3/4	3/8	-		1
	NUT: Variation 1; 1 5/8" x 1 3/8" x 5/16".							
	10H1-18	Iron	Comp	6 1/8	3/8	-		1
	NUT: Variation 1; 1 5/8" sq. x 5/16".							

TABLE 175 NAIL DISTRIBUTION (Variation and Length) – 9GIO

Length \ Variation	A1	A2	A3	A4	A5	A6	A15	A81	B6	B8	C1	C2		TOTAL
3/4			1											
1														
1/4				1										1
1/2												1		1
3/4														
2				1					1					1
1/4		1							2					1
1/2				1								1		2
3/4												1		1
3														
1/4				1										1
1/2														
3/4				1	1									1
4			1											1
1/4				2								1		1
1/2				2								1		3
3/4			1	1										2
5			2	1										1
1/4			1											1
1/2														1
3/4														2
6														
1/4														
1/2														
3/4														
7														
1/4														
1/2														
3/4														
8														
1/4														
1/2														
3/4														
9														
1/4														
1/2														
3/4														
10														
1/4														
1/2														
3/4														
11														
1/4														
1/2														
3/4														
Indeterminate														
TOTAL	1	1	5	11	1	9	1	1	3	3	1	5		

TABLE 176 — CLEVIS PIN - 9G44

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	DIAMETER	HOLE: LENGTH AND WIDTH	QUANTITY
2	44T1-25	Iron	Frag.	-	3/8 sq.	-	1

LYNCH PIN: Variation 1; length 11/16"; maximum cross section 5/8" x 1/8".

TABLE 177 — KEY - 9G44

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	BOW: LENGTH	BOW: WIDTH	STEM: LENGTH	STEM: DIAMETER	PIN: LENGTH	PIN: DIAMETER	BIT: LENGTH	BIT: WIDTH	BIT: THICKNESS	COLLAR: DIAMETER	QUANTITY
2	44T1-13	Iron	Comp	5 5/8	1 5/16	1 13/16	3 5/16	1/2 - 1/8	1	13/32	31/32	1	7/16	3/8	1

TABLE 178 SCREW - 9G44

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY	VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY
3	44R4-9	Iron	Comp	1	1						
Ind	44T1-21	Iron	Frag	Ind	1						

Possible Variation 1 or 3.

TABLE 179 THUMB LATCH, HANDLE - 9G44

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	HANDLE				CUSP: WIDTH	LIFT BAR: LENGTH	NUMBER AND DIAMETER OF FASTENING HOLES	PLATE		QUANTITY
					LENGTH	RISE	MAXIMUM WIDTH	DIAMETER				WIDTH	THICKNESS	
2	44R1-1	Iron	Incomp	7 9/16	4 19/32	1 5/8	NA	3/8	NA	3 1/8	3, 1/4	1 9/16	1/16	1

Only the thumb press on the lift bar is missing.

TABLE 180 NAIL DISTRIBUTION (Variation and Length) — 9G44

Length \ Variation	A1	A2	A3	A6	A26	A30	A38	A55	A63	A81	A94	A96	B1	B6	B8	C2	C4		TOTAL
3/4																			
1																			
1/4																			
1/2					1										1				2
3/4																1			1
2															2				2
1/4		1														2			3
		1																	1
1/2																			1
		2														1			3
3/4		1						1								1			1
3															5	1			6
1/4																1			1
1/2																			
3/4																			
4															1				1
1/4																1			1
																4			4
1/2			1																1
3/4			2																2
5												1							1
1/4																1			1
1/2																			
3/4																			
6																			
1/4																1			1
1/2																			
3/4																			
7																			
1/4																			
1/2																			
3/4																			
8																			
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate																			
TOTAL	10	5	3	55	1	4	1	1	1	1	4	1	2	6	9	14	1		

TABLE 181 — NUT - 9G45

VARIATION	1
PROVENIENCE	45C1-7
MATERIAL	Iron
COMPLETENESS	Comp
LENGTH AND WIDTH or DIAMETER	1 sq.
THICKNESS	9/16
HOLE: DIAMETER	1/2
—	
QUANTITY	1

TABLE 182 — PINTLE - 9G45

VARIATION	Ind
PROVENIENCE	45M6-8
MATERIAL	Iron
COMPLETENESS	Par
SHANK: LENGTH	1 (R)
SHANK: MAXIMUM CROSS SECTION	3/8 x 5/32
SHANK: WIDTH AT SHOULDER	NA
PIN: LENGTH	1
PIN: MAXIMUM DIAMETER	1/4
WING: MAXIMUM WIDTH	NA
NUMBER AND DIAMETER OF FASTENING HOLES	NA
REINFORCING ARM: LENGTH	NA
REINFORCING ARM: MAXIMUM CROSS SECTION	NA
QUANTITY	1

TABLE 183 NAIL DISTRIBUTION (Variation and Length) – 9G45

Length \ Variation	A1	A2	A6	A15	A26	A30	A38	A63	A71	A72	A90	A92	A94	A95	A114	C2	C4	C6	TOTAL
3/4																			
1																			
1/4		1										1							1
1/2		1			1							1				1		1	1
3/4		2										1			1			1	3
2																			4
1/4		1														3		1	4
1/2																4			5
3/4																3			3
3																2		3	5
1/4		1														1			1
1/2		2																	2
3/4		3																	3
4																			
1/4																1			1
1/2																			
3/4														1					1
5																			
1/4																			
1/2																			
3/4																			
6																			
1/4																			
1/2																			
3/4																			
7																			
1/4																			
1/2																			
3/4									1										1
8									1					1					2
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate																			
TOTAL	38	11	104	1	1	7	1	3	2	1	3	3	10	2	1	16	3	6	

TABLE 184 NAIL DISTRIBUTION (Variation and Length) – 9G47

Length \ Variation	A1	A2	A3	A6	A30	A94	TOTAL
3/4							
1							
1/4							
1/2		1					1
3/4							
2							
1/4							
1/2							
3/4							
3							
1/4							
1/2		1					1
3/4							
4							
1/4		1					1
1/2			1				1
3/4							
5							
1/4							
1/2							
3/4							
6							
1/4							
1/2							
3/4							
7							
1/4							
1/2							
3/4							
8							
1/4							
1/2							
3/4							
9							
1/4							
1/2							
3/4							
10							
1/4							
1/2							
3/4							
11							
1/4							
1/2							
3/4							
indeterminate							
TOTAL	11	3	1	12	2	1	

TABLE 185

SCREW - 9648

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY
Ind	48K7-7	Iron	Frag	Ind	1

Possible Variation 4.

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY

TABLE 186 NAIL DISTRIBUTION (Variation and Length) – 9G48

Length \ Variation	A1	A2	A6	A15	A94		TOTAL
3/4							
1							
1/4							
1/2		1					1
3/4							
2		1					1
1/4							
1/2		1					1
3/4							
3							
1/4							
1/2							
3/4							
4							
1/4							
1/2							
3/4							
5							
1/4							
1/2							
3/4							
6							
1/4							
1/2							
3/4							
7							
1/4							
1/2							
3/4							
8							
1/4							
1/2							
3/4							
9							
1/4							
1/2							
3/4							
10							
1/4							
1/2							
3/4							
11							
1/4							
1/2							
3/4							
Indeterminate							
TOTAL	9	3	53	1	2		

TABLE 187

EYE - 9G57

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	EYE: INSIDE DIAMETER	THREAD: DIAMETER	WASHER: LENGTH AND WIDTH	QUANTITY
Ind	57E2-36	Iron	Incomp	2 3/8 (R)	3/8	5/8	NA	NA	1

Possible Variation 7 or 8.

TABLE 188 NAIL DISTRIBUTION (Variation and Length) – 9657

Length \ Variation	A1	A2	A3	A4	A5	A6	A11	A12	A15	A26	A28	A30	A52	A63	A69	A70	A95	A114	A118
3/4																			
1																			
1/4																			
1/2		3		1														1	
3/4		1 2		1 1							1								
2		1																1	
1/4																			
1/2		1																	
3/4				2						2									
3		1 3					1						1						
1/4		1		1	2														
1/2		1			1														
3/4					1														
4		1			1														
1/4		1	1	3 5	3														
1/2			1 5	2 1	2 1													1	
3/4		1	5 1	4 1				1									1		
5			7 3	1													1		
1/4			1																
1/2																			
3/4				1															
6																			
1/4																			
1/2																			
3/4																			
7															1				
1/4																			
1/2																			
3/4																			
8																			
1/4																			
1/2																			
3/4																			
9																			
1/4																1			
1/2															1				
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate																			
TOTAL	20	17	24	24	11	131	1	1	2	2	1	2	1	1	2	1	2	3	2

TABLE 188 (cont.) NAIL DISTRIBUTION (Variation and Length) — 9G57

Length \ Variation	B1	B8	C2	D1	TOTAL
3/4					
1					
1/4				1	1
1/2					4
3/4					1
2					2
1/4					4
1/2					1
3/4					1
3					1
1/4			1		5
1/2					2
3/4					3
4					2
1/4					1
1/2					2
3/4					5
5					8
1/4					5
1/2					7
3/4					10
6					5
1/4					7
1/2					5
3/4					1
7					
1/4					1
1/2					
3/4					
8					
1/4					
1/2					
3/4					
9					
1/4					1
1/2					1
3/4					
10					
1/4					
1/2					
3/4					
11					
1/4					
1/2					
3/4					
Indeterminate					
TOTAL	1	1	1	1	

Hospital-Master Carpenter's Quarters (9G11; Fig. 48: structure 11)

Construction of the building was some time during period I as it appears on a 1788 sketch of the site. It was put to various uses during the War of 1812-14 and by 1815 it no longer appears on plans of the site.

Except for the nails, only a small quantity of artifacts are present (Tables 189-197). Since the building appears to have been removed some time before 1815 it is likely that hardware would have been salvaged for other construction. The high frequency of wrought nails (97.9 per cent; Table 29) is consistent with the history of the building; construction at an early date and removal before cut nails were used to any extent.

TABLE 189 — NUT - 9G11

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH AND WIDTH or DIAMETER	THICKNESS	HOLE: DIAMETER		QUANTITY
1	11A1-59	Iron	Comp	1 3/16 sq.	3/8	7/16		1

TABLE 190 — DOOR LOCK - 9G11

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	HOUSING					QUANTITY
				LENGTH	MAXIMUM WIDTH	MINIMUM WIDTH	PLATE: THICKNESS		
Ind	11K1-5	Iron	Par	3 5/8 (R)	2 1/2 (R)	Ind	1/16		1
Consisting of a part of a possible plate from an unidentified variation of door lock.									

TABLE 191 DOOR LOCK, LOCK BOLT - 9G11

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY
1	11H1-79	Iron	Comp	7 1/2	1
	11V4-4	Iron	Incomp	5 3/16 (R)	1

TABLE 192 EYE - 9G11

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	EYE: INSIDE DIAMETER	THREAD: DIAMETER	WASHER: LENGTH AND WIDTH	QUANTITY
6	11V3-121	Iron	Incomp	2 3/4 (R)	3/16	3/16	NA	NA	1

TABLE 193 HINGE - 9G11

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	MINIMUM WIDTH	THICKNESS	NUMBER PER SIDE AND DIAMETER OF FASTENING HOLES	COUNTERSINKING	HOLE ARRANGEMENT	F PLATE: LENGTH	MEDIAN: WIDTH	JOINT: LENGTH	SOCKET: INSIDE DIAMETER	QUANTITY
2	11F1-5	Iron	Incomp	2 15/32	1 13/32	NA	1/8	3, 7/32	Front	Offset	NA	NA	NA	NA	1
14	11V5-34	Iron	Par	7 7/16 (R)	15/16 (R)	7/16	1/8	2, 3/16	Abs	Linear	NA	NA	NA	Ind	1
Ind	11U10-20	Iron	Par	10 7/8 (R)	1 1/8	11/16 (R)	1/8	2, 3/16 - 1/4	Front	Ind	NA	NA	NA	3/8	1

Possible Variation 13 or 14.

TABLE 194 RIVET - 9G11

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	MAXIMUM CROSS SECTION	HEAD: DIAMETER	WASHER: LENGTH AND WIDTH	QUANTITY
2	11H1-14	Iron	Comp	2 5/8	-	-	-	1

TABLE 195 | STAPLE - 9G11

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	INSIDE WIDTH	BAR: MAXIMUM CROSS SECTION	SHOULDER HEIGHT	PLATE			QUANTITY
								LENGTH	WIDTH	THICKNESS	
4	11M1-67	Iron	Incomp	3 5/16 (R)	1 1/8	3/8 sq.	NA	NA	NA	NA	1
	11X1-37	Iron	Incomp	2 1/8 (R)	1/2	1/4 sq.	NA	NA	NA	NA	1
8	11M1-64	Iron	Incomp	2 (R)	1 21/32	1/2 x 3/16	NA	NA	NA	NA	1
Ind	11U5-33	Iron	Incomp	2 7/16 (R)	1 1/2	9/16 x 3/16	NA	NA	NA	NA	1

TABLE 196 — THUMB LATCH, LIFT BAR - 9G11

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	THUMB PRESS: DIAMETER	THUMB PRESS: THICKNESS	QUANTITY
3	11M1-65	Iron	Comp	4 3/16	7/16 x 1/8	1 3/16	-	1

TABLE 197 — WASHER - 9G11

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH AND WIDTH OR DIAMETER	THICKNESS	HOLE: DIAMETER OR LENGTH AND WIDTH	FASTENING HOLE: DIAMETER	QUANTITY
2	11V5-32	Iron	Comp	3 3/8 x 1 13/32	1/16	3/4	-	1

TABLE 198 NAIL DISTRIBUTION (Variation and Length) — 9GII

Length \ Variation	A1	A2	A3	A4	A5	A6	A11	A14	A15	A26	A30	A36	A37	A38	A43	A59	A60	A61	A63
3/4																			
1				1															
1/4		1								3		2							
										1		2							
1/2		3								1		1				1			
		2																	
3/4		6	1	1						4									
		2																	
2		7		1												1			
		17										1	1						
1/4		13					1			1									
		8																	
1/2		14	1							1		1	3						
		3								1									
3/4		7											1						
		5														1			
3		13						1											
		4					2												
1/4		27																	
		5			1														
1/2		22														1			
		19																	
3/4		19		1									1						
		9			1														
4		11					1												
		10	2		1														
1/4		13	2															1	
		11		1	1														
1/2		10	3																
		5	2																
3/4		7	1	1	1											1			
			2	1									1						
5		5	1	1														1	
1/4		2															1	1	
		1															1		
1/2		3														1	1		
		1	1																
3/4		4																	
6		1																	
1/4																			
1/2																			
3/4																			
7																			
1/4																			
1/2																		1	
																		1	
3/4			1																
8																	1		
1/4																			
			1																
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate		2	1	1						1		1							
TOTAL	281	292	19	9	5	808	4	1	20	13	55	8	7	6	2	6	4	5	31

TABLE 198 (cont.) NAIL DISTRIBUTION (Variation and Length) — 9GII

Length \ Variation	A69	A72	A77	A78	A79	A81	A86	A90	A91	A92	A94	A95	A96	A97	A113	A114	A116	A118	B1
3/4																			
1																			
1/4										1									
1/2																1			
3/4							1			1									
2							1			1					1				
1/4										1									
1/2										1									
3/4										2									
3										1									
1/4										2									
1/2										4									
3/4										3									
4										1									
1/4										1									
1/2				2			1			1									
3/4			1		1					1									
5				1	2					1									
1/4					1					1									
1/2										1									
3/4										1									
6										1									
1/4										1									
1/2										1									
3/4										1									
7										1									
1/4	1									1									
1/2										1									
3/4										1									
8										1									
1/4										1									
1/2										1									
3/4										1									
9	1									1									
1/4										1									
1/2										1									
3/4										1									
10										1									
1/4										1									
1/2										1									
3/4										1									
11										1									
1/4										1									
1/2										1									
3/4										1									
Indeterminate												1					2		
TOTAL	2	1	1	3	4	14	3	6	1	27	73	18	15	5	1	1	2	43	5

TABLE 198 (cont.) NAIL DISTRIBUTION (Variation and Length) — 9GII

Length \ Variation	B6	B7	B8	B10	B13	B15	B16	TOTAL
3/4								
1								1
1/4								7
1/2	1							3
3/4								8
2	2							3
1/4								14
1/2	1							2
3/4	4							13
3	1							20
1/4	2							16
1/2	1	1		1				11
3/4								26
4	1					1		6
1/4								8
1/2								6
3/4								16
5								12
1/4								31
1/2								8
3/4								25
6								20
1/4								22
1/2								11
3/4								15
7								15
1/4								17
1/2								15
3/4								20
8								11
1/4								17
1/2								8
3/4								13
9								2
1/4								5
1/2								3
3/4								5
10								2
1/4								5
1/2								1
3/4								1
11								
1/4								
1/2								7
3/4								
Indeterminate					1			10
TOTAL	13	1	15	1	1	1	1	

Length \ Variation	B6	B7	B8	B10	B13	B15	B16	TOTAL
3/4								
1								1
1/4								1
1/2								1
3/4								1
2								1
1/4								
1/2								1
3/4								
3								1
1/4								
1/2								
3/4								
4								
1/4								
1/2								
3/4								
5								
1/4								
1/2								
3/4								
6								
1/4								
1/2								
3/4								
7								
1/4								
1/2								
3/4								
8								
1/4								
1/2								
3/4								
9								
1/4								
1/2								
3/4								
10								
1/4								
1/2								
3/4								
11								
1/4								
1/2								
3/4								
Indeterminate								
TOTAL								

Gun Platforms (9G12, 9G42, 9G54, 9G55, 9G56; Fig. 48: structures 12, 27-30)

Gun platforms were used both during the War of 1812-14 and the Rebellion of 1837-38. It is not definite whether these were the same platforms, renovated or repaired for the latter period, or whether they were new ones built for each event.

The small quantity of artifacts, other than the nails (Tables 199-210, 213), reflect the absence of buildings in these areas although some construction did take place. The relatively large quantity of artifacts in 9G12 does not necessarily indicate the presence of a building since it could also be refuse from several buildings in the immediate vicinity. Although the nail totals for most operations are small, the predominant type is still wrought (80.1 per cent to 100 per cent; Table 29). The larger quantity of nails in 9G12 and the higher frequency of cut nails (19.7 per cent; Table 29) may be associated with construction in the vicinity some time after period II, possibly repair or alteration of the Guard House.

The presence and relative frequency of nail variation A108 in 9G54 and 9G55 (Tables 214, 215) indicates construction of a different nature or time period for these two operations in contrast to the other gun platforms. All nails in the variation are long, exceeding 7-3/4 in., indicating an extensive use of heavy timber for construction.

Since nails of similar length are not present in the remaining gun platforms, a difference in type of construction appears possible. If, on the other hand, timbers from gun platforms had been removed between 1814 and 1837 it is also possible that 9G54 and 9G55 represent the only gun platforms rebuilt in 1837. The form of the nails is also of some interest and importance. They are one of the few variations, others being A106 and A107, which are made of circular stock, in contrast to the regular use of rectangular or square stock. This could reflect a later period when circular stock was more readily available and, thus, could again suggest construction during 1837.

TABLE 199 BOLT - 9G12

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	THREAD: DIAMETER		QUANTITY
3	12C1-97	Iron	Incomp	-	7/16	Ind		1
Ind	12C1-99	Iron	Frag	-	Ind	1/2		1

Consisting of threads only. NUT: Variation 1; 1 7/16" x 1 3/8" x 1/2".

TABLE 200 NUT - 9G12

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH AND WIDTH or DIAMETER	THICKNESS	HOLE: DIAMETER		QUANTITY
1	12B1-184	Iron	Comp	1 3/16 sq.	1/2	7/16		1
	12C1-	Iron	Comp	1 11/16 x 1 5/8	5/8	11/16		1

TABLE 201 — DOOR LOCK - 9G12

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	HOUSING: LENGTH	HOUSING: MAXIMUM WIDTH	HOUSING: MINIMUM WIDTH	HOUSING: PLATE: THICKNESS		QUANTITY
Ind	12A1-72	Iron	Incomp	3 1/2	2 3/16	1 15/16	1/16		1
	Consisting of only one plate; possible Variation 2.								

TABLE 202 — EYE - 9G12

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	EYE: INSIDE DIAMETER	THREAD: DIAMETER	WASHER: LENGTH AND WIDTH		QUANTITY
Ind	12A1-69	Iron	Incomp	-	1/4 sq.	7/16	NA	NA		1
	Point missing; possible Variation 3.									

TABLE 203 — GATE HOOK - 9G12

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	HOOK: LENGTH	EYE: INSIDE DIAMETER	QUANTITY
4	12D2-92	Iron	Comp	6 13/16	7/16 x 3/8	3	5/8	1

TABLE 204 — HINGE - 9G12

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	MINIMUM WIDTH	THICKNESS	NUMBER PER SIDE AND DIAMETER OF FASTENING HOLES	COUNTERSINKING	HOLE ARRANGEMENT	T PLATE: LENGTH	MEDIAN: WIDTH	JOINT: LENGTH	SOCKET: INSIDE DIAMETER	QUANTITY
1	12B1-186	Iron	Comp	2 9/16	2	NA	3/32	3, 1/4 9/32	F&B	Linear	NA	NA	NA	NA	1
	12B1-187	Iron	Incomp	2 1/2	7/8 (tml)	NA	1/8	3, 9/32 5/16	Front	Offset	NA	NA	NA	NA	1
Ind	12B1-184	Iron	Frag	2 1/2 (R)	5/8 (R)	19/32	1/8	1, 7/32	Front	Ind	NA	NA	NA	NA	1

Consisting only of part of a strap with its end treatment.

TABLE 205

RIVET - 9G12

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	MAXIMUM CROSS SECTION	HEAD: DIAMETER	WASHER: LENGTH AND WIDTH	QUANTITY
Ind	12D1-32	Iron	Comp	5 1/8	1/4 sq.	-	-	1

Circular washer. Possible Variation 2.

TABLE 206

SCREW - 9G12

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY	VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY
1	12A1-70	Iron	Comp	29/32	1	Ind	12C1-100	Iron	Frag	Ind	1

TABLE 207 SLIDING BOLT - 9G12

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	BOLT				PLATE				QUANTITY
				LENGTH	MAXIMUM CROSS SECTION	HANDLE		LENGTH	WIDTH	THICKNESS	NUMBER AND DIAMETER OF FASTENING HOLES	
						DIAMETER	HEIGHT					
2	12C1-	Iron	Par	4 1/16 (R)	5/8 x 5/32	Ind	Ind	Ind	Ind	Ind	Ind	1
	12C1-102	Iron	Comp	10	17/32 x 7/32	1 1/8	1 11/16	6 1/4	1 1/4	1/16	6, 5/32 - 1/4	1

TABLE 208 THUMB LATCH, BAR - 9G12

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	MAXIMUM WIDTH	MINIMUM WIDTH	THICKNESS	PIVOT END			HANDLE		QUANTITY
								WIDTH	THICKNESS	HOLE: DIAMETER	LENGTH	DIAMETER	
1	12C1-101	Iron	Comp	7	5/8	1/4	3/8	1 5/16	3/32	3/16	NA	NA	1

TABLE 209

THUMB LATCH, CATCH - 9G12

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	HOOK		REINFORCING SHANK		PLATE		NUMBER AND DIAMETER OF FASTENING HOLES	QUANTITY
						LENGTH	HEIGHT	LENGTH	DISTANCE FROM HOOK	LENGTH	WIDTH		
Ind	12D1-33	Iron	Incomp	3 3/8 (R)	3/8 x 1/4	13/32	3/8	NA	NA	NA	NA	NA	1

Possible Variation 1 or 2.

TABLE 210

WASHER - 9G12

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH AND WIDTH or DIAMETER	THICKNESS	HOLE: DIAMETER or LENGTH AND WIDTH	FASTENING HOLE: DIAMETER	QUANTITY
1	12E1-95	Iron	Comp	1 3/16	3/16	11/16	NA	1

TABLE 211 NAIL DISTRIBUTION (Variation and Length) — 9G12

Length \ Variation	A1	A2	A3	A4	A5	A6	A11	A13	A15	A26	A28	A29	A30	A33	A60	A61	A63	A69	A70
3/4																			
1																			
1/4		1		1						3									
1/2		1		2						3 5	3								
3/4		1	1								1								
2		1 1		2 3								1							
1/4		1		1 2				1								1			
1/2		1		1 5															
3/4		1		1 1	1									1		2			
3		3 1		6 3	1														
1/4		3 2		15 9	1		1	1											
1/2		1		8 6							1				1				
3/4		1		8 2				1											
4				5 7	1														
1/4		1	1	4 5	1														1
1/2		2	1 2	5 8 9				1										1 1	1 1
3/4		1	1 2	4 7												1			1
5				6 1															
1/4			1	1 2															
1/2		1																	
3/4																			
6				1															
1/4																			
1/2																			
3/4				1															1
7																			
1/4			1															1	1
1/2																1			
3/4			1																
8															1				
1/4																			
1/2																			
3/4																			
9																		1	
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate				4															
TOTAL	101	23	12	146	5	129	1	4	7	11	5	1	10	1	2	5	5	5	6

TABLE 211 (cont.) NAIL DISTRIBUTION (Variation and Length) — 9G12

Length \ Variation	A72	A73	A79	A80	A81	A92	A93	A94	A95	A96	A107	B1	B6	B8	C2	TOTAL
3/4																
1																4
1/4													1			8
1/2													1			8
3/4													2			3
2										1			2		1	4
1/4						1				1			4			8
1/2													1			3
3/4													4			9
3													1			2
1/4							1						4			10
1/2							1						1			4
3/4							1						2			6
4			1				1			1			2			11
1/4		1		1			1						6			11
1/2		2	1							1			10			31
3/4		2	2							3			2			14
5		1	2							1			6			15
1/4		1	3							2			3			11
1/2		1	2							1						10
3/4		1	2							1			1			5
6		1	1						1				1			9
1/4																8
1/2		1														1
3/4																7
7																11
1/4																16
1/2																19
3/4																10
8																16
1/4																13
1/2																7
3/4																7
9																4
1/4											1					3
1/2											1					1
3/4																1
10																1
1/4																1
1/2																2
3/4																1
11																1
1/4																1
1/2																1
3/4																1
Indeterminate																4
TOTAL	1	12	21	1	14	1	5	10	1	13	2	17	55	58	1	

TABLE 212 NAIL DISTRIBUTION (Variation and Length) – 9G42

Length \ Variation	A1	A2	A3	A6	A30	A36	A60	A63	A92	A94	TOTAL
3/4											
1											
1/4											
1/2						1					1
3/4		1									1
2											
		1							1		2
1/4		1									1
1/2											
3/4											
3											
1/4											
1/2		2									2
3/4			1								1
4											
1/4											
1/2		1									1
3/4		1									1
5			1								1
1/4		1									1
1/2											
3/4											
6											
1/4											
1/2											
3/4											
7											
1/4											
1/2							3				3
3/4							1				1
8											
1/4							1				1
1/2											
3/4											
9											
1/4											
1/2											
3/4											
10											
1/4											
1/2											
3/4											
11											
1/4											
1/2											
3/4											
Indeterminate											
TOTAL	14	8	2	25	1	1	5	5	1	1	

TABLE 213 | DOOR LOCK - 9G54

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	HOUSING					QUANTITY
				LENGTH	MAXIMUM WIDTH	MINIMUM WIDTH	PLATE: THICKNESS		
Ind	54B1-18	Iron	PART Comp	NA	NA	NA	NA		1
Consisting only of a side plate, made of channel stock, similar to those of Variation 1 or 3.									

TABLE 214 NAIL DISTRIBUTION (Variation and Length) – 9G54

Length \ Variation	A1	A2	A3	A4	A5	A14	A36	A78	A108	A118	B6		TOTAL
3/4													
1													
1/4													
1/2							1						1
3/4													
2													
1/4				1									1
1/2													
3/4		1											1
3													
1/4						1					1		1 1
1/2													
3/4		1											1
4													
1/4													
1/2													
3/4		2 1											2 1
5								1					1
1/4													
1/2													
3/4													
6													
1/4													
1/2													
3/4													
7													
1/4													
1/2			1										1
3/4									1				1
8													
1/4									1				1
1/2									1 1 1				1 1 1
3/4									1 1 1				1 1 1
9									2				2
1/4									1				1
1/2									1 2 2				1 2 2
3/4									4 1				4 1
10									1 1 1 1				1 1 1 1
1/4									1				1
1/2									1				1
3/4													
11													
1/4													
1/2													
3/4													
Indeterminate													
TOTAL	4	5	1	1	4	1	1	1	26	1	1		

TABLE 215 NAIL DISTRIBUTION (Variation and Length) – 9G55

Length \ Variation	A1	A2	A3	A6	A14	A30	A69	A85	A108	A114	TOTAL
3/4											
1											
1/4											
1/2											
3/4											
2								1			1
1/4										1	1
1/2											
3/4											
3					1						1
1/4										1	1
1/2							1				1
3/4											
4											
1/4											
1/2		2	1								3
3/4											
5											
1/4											
1/2											
3/4											
6											
1/4											
1/2											
3/4											
7											
1/4											
1/2											
3/4			1								1
8											
1/4									2		2
1/2											
3/4									2 1 1		2 1 1
9									1		1
1/4									1		1
1/2									2		2
3/4									2 1		2 1
10									2 3		2 3
1/4									1		1
1/2											
3/4											
11											
1/4									1		1
1/2											
3/4											
indeterminate											
TOTAL	11	2	2	11	1	1	1	1	20	2	

TABLE 216 NAIL DISTRIBUTION (Variation and Length) – 9G56

Length \ Variation	A1	A3	A6	A1G8	TOTAL
3/4					
1					
1/4					
1/2					
3/4					
2					
1/4					
1/2					
3/4					
3					
1/4					
1/2					
3/4					
4					
1/4					
1/2					
3/4					
5					
1/4					
1/2					
3/4					
6					
1/4					
1/2					
3/4					
7					
1/4		1			1
1/2					
3/4					
8					
1/4					
1/2					
3/4					
9				1	1
1/4					
1/2					
3/4					
10					
1/4					
1/2					
3/4					
11					
1/4					
1/2					
3/4					
Indeterminate					
TOTAL	1	1	3	1	

Barracks-Carpenter's Shop-Stables (9G13; Fig. 48: structure 13)

Possibly as many as three buildings occupied the area at one time or another. Plans of 1814 and 1815 show a building in this area but the descriptions differ and it is not clear whether the same building or two different ones is intended. Plans of the 1850's show a building in the same area but of a different shape.

Construction during period I or II is suggested by the frequency of wrought nails (88.8 per cent; Table 29). The absence of cast hinges and the presence of several hinges of the general H-HL form (Table 220) suggest construction during period I. The small quantity of artifacts also suggests salvaging of hardware for other buildings.

TABLE 217 NUT - 9G13

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH AND WIDTH OR DIAMETER	THICKNESS	HOLE: DIAMETER	QUANTITY
1	13F1-68	Iron	Comp	1 1/2 x 1 7/16	9/16	7/16	1

TABLE 218 DOOR LOCK - 9G13

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	HOUSING: LENGTH	HOUSING: MAXIMUM WIDTH	HOUSING: MINIMUM WIDTH	PLATE: THICKNESS	QUANTITY
4	13E1-12	Iron	Par	5 1/8	4 1/4	NA	3/32	1

Consisting only of the main plate with the lock bolt.

TABLE 219 EYE - 9G13

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	EYE: INSIDE DIAMETER	THREAD: DIAMETER	WASHER: LENGTH AND WIDTH		QUANTITY
Ind	13F1-67	Iron	Incomp	1 3/4 (R)	1/4 x 3/16	1/2	NA	NA		1

TABLE 220 HINGE - 9G13

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	MINIMUM WIDTH	THICKNESS	NUMBER PER SIDE AND DIAMETER OF FASTENING HOLES	COUNTERSINKING	HOLE ARRANGEMENT	T PLATE: LENGTH	MEDIAN: WIDTH	JOINT: LENGTH	SOCKET: INSIDE DIAMETER	QUANTITY
18	13H1-39	Iron	Incomp	7 1/2 (R)	1 5/16	11/16 (R)	7/32	3, 5/16	Back	-	NA	NA	NA	9/16	1
Ind	13A1-32	Iron	Incomp	6 9/16 (R)	1 1/16 (tml)	NA	1/16	5, 3/16	Front	Linear	NA	7/32 (tml)	2 1/8	NA	1
	Possible Variation 8 or 9.														
	13C1-10	Iron	Par	4 3/4 (R)	15/16 (tml)	NA	1/16 - 3/32	4, 3/32 - 1/8	Front	Linear	NA	3/16 (tml)	1 21/32	NA	1
	Possible Variation 8 or 9.														
	13L1-	Iron	Incomp	8 5/8 (R)	31/32 (R)	3/8	1/8	2, 3/16	Front	-	NA	NA	NA	Ind	1
	Possible Variation 16.														

TABLE 221 — PINTLE - 9G13

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	SHANK: LENGTH	SHANK: MAXIMUM CROSS SECTION	SHANK: WIDTH AT SHOULDER	PIN: LENGTH	PIN: MAXIMUM DIAMETER	WING: MAXIMUM WIDTH	NUMBER AND DIAMETER OF FASTENING HOLES	REINFORCING ARM: LENGTH	REINFORCING ARM: MAXIMUM CROSS SECTION	QUANTITY
2	13L1-10	Iron	Comp	5 5/8	1/2 sq.	NA	1 1/2	9/16	NA	NA	NA	NA	1
9	13L1-11	Iron	Comp	5 15/16	5/8 x 3/8	NA	2 3/16	9/16	NA	NA	NA	NA	1
	Axis of point is vertical.												
	13L1-12	Iron	Comp	6 15/16	15/16 x 9/16	NA	3 1/16	7/8	NA	NA	NA	NA	1
	Axis of point is horizontal.												
Ind	13K1-10	Iron	Incomp	5 1/2 (R)	1 x 5/8	NA	3 3/32	7/8	NA	NA	NA	NA	1
	Possibly Variation 8 or 9. Possibly a mate for 13L1-12.												

TABLE 222 — WASHER - 9G13

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH AND WIDTH or DIAMETER	THICKNESS	HOLE: DIAMETER or LENGTH AND WIDTH	FASTENING HOLE: DIAMETER		QUANTITY
3	13F1-66	Iron	Comp	2 1/8	1/4	1 1/8	NA		1

TABLE 223 NAIL DISTRIBUTION (Variation and Length) — 9G13

Length \ Variation	A1	A2	A3	A4	A5	A6	A8	A13	A15	A16	A19	A20	A25	A26	A29	A30	A33	A42	A45
3/4																			
1																		1	
1/4																			
1/2		1												1					1
3/4		1		2										1					
2		1																	
1/4					1														
1/2				1															
3/4		3		1	1														
3		2 5		1	2 1 1					1									
1/4		3 3		1											1				
1/2		3 2						1			1								
3/4		5 4			1		1				1						1		
4		2 3		1	1 2			1			1								
1/4		4 2		2															
1/2		2 3		2	1														
3/4		4 5	1																
5		1 3																	
1/4		1	1																
1/2		1																	
3/4		1 1																	
6																			
1/4																			
1/2																			
3/4																			
7																			
1/4																			
1/2																			
3/4			1																
8																			
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate																			
TOTAL	61	68	3	11	11	117	1	2	5	1	3	10	2	2	1	2	1	1	1

TABLE 223 (cont.) NAIL DISTRIBUTION (Variation and Length) – 9G13

Length \ Variation	A48	A52	A53	A59	A60	A61	A63	A66	A69	A70	A72	A78	A79	A80	A81	A85	A92	A94	A95
3/4																			
1																			
1/4																			
1/2																			
3/4																1			
2																			
1/4																			
1/2								1											
3/4		1																	
3																			
1/4			1																
1/2																			
3/4				1													1		
4						1											1		
1/4																	1		
1/2																			
3/4						1						1							1
5					1				1			1	2						
1/4						1			3	2		2							
1/2									1										
3/4																			
6						1													
1/4										1			1						
1/2										5									
3/4										14									
7										6		1							
1/4																			
1/2																			
3/4																			
8																			
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate														1					
TOTAL	1	1	1	1	1	4	1	1	5	28	7	5	3	1	7	1	3	1	1

TABLE 223 (cont.) NAIL DISTRIBUTION (Variation and Length) — 9G13

Length \ Variation	A96	A97	B1	B2	B6	B9	B10	B11	D3	TOTAL
3/4										
1										1
1/4					1					4
1/2					1					4
3/4										3
2					1					1 / 2
1/4										1
1/2									1	1
3/4										2
3					1					3
1/4				1	1		1			6 / 10
1/2				1	3		1			4 / 10
3/4					1					6
4					2		1			6 / 9
1/4					1					4
1/2					2					4 / 10
3/4					1					8
5					1					5 / 9
1/4										4
1/2										4 / 2
3/4	1				3					6 / 7
5										9 / 5 / 6
1/4										1
1/2										7 / 2
3/4										1 / 1
6										1 / 1 / 1
1/4										2
1/2										5 / 14
3/4										6 / 1
7										
1/4										
1/2										
3/4										1
8										
1/4										
1/2										
3/4										
9										
1/4										
1/2										
3/4										
10										
1/4										
1/2										
3/4										
11										
1/4										
1/2										
3/4										
Indeterminate										1
TOTAL	1	2	5	2	18	14	3	2	1	

Powder Magazine (9G14; Fig. 48: structure 14)

The building first appears on plans of 1814-15 although its date of construction is not known. Folan and Ingram suggest a date of construction during period II. Powder was still being stored in the building as late as 1854. In 1872 the building was sold and removed.

The artifacts provide several problems. The high proportion of wire nails (67.9 per cent; Table 29) cannot be related to any aspect of the building's construction. Wire nails were not available during period II and were probably also not available during any part of the building's later history. They are presumably refuse from some other later construction. The absence of non-iron hardware in a building known to have been used throughout its history for the storage of powder is also a surprise. The use of a non-sparking metal in an explosive environment appears logical and reasonable but does not appear to have been the case here. It may, however, be that the small quantity of artifacts (Tables 224-233) is not related to the powder magazine but is refuse accumulated after removal of the building. The presence of wire nails certainly indicate some deposition of artifacts at such a time.

TABLE 224				BOLT - 9G14				
VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	THREAD: DIAMETER		QUANTITY
2	14J1-64	Iron	Comp	3 1/2	1/2	-		1
	14J1-65	Iron	Comp	3 1/2	1/2	-		1
8	14J1-66	Iron	Incomp	-	5/8	Ind		1
10	14A1-23	Iron	Comp	15/16	1/4	-		1
11	14E1-12	Iron	Comp	3 1/2	1/4	-		1
	NUT: Variation 1; 9/16" sq. x 9/32. WASHER: Variation 1.							
	14E1-13	Iron	Comp	9 7/8	7/16	1/2		1
	14J1-60	Iron	Comp	4 3/4	7/16	1/2		1
	14J1-61	Iron	Comp	8 1/4	1/2z	1/2		1

TABLE 224 (cont.) BOLT - 9G14

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	THREAD: DIAMETER	QUANTITY
12	14B1-38	Iron	Comp	10 7/16	1/2	15/32	1
13	14J1-62	Iron	Comp	5 1/2	1/2	1/2	1
14	14J1-67	Iron	Comp	3 9/16	1/2	1/2	1
NUT: Variation 1; 15/16" sq. x 7/16". WASHER: Variation 1.							
Ind	14J1-63	Iron	Incomp	-	3/8	-	1

TABLE 225 NUT - 9G14

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH AND WIDTH or DIAMETER	THICKNESS	HOLE: DIAMETER	QUANTITY
2	14J1-68	Iron	Comp	13/16 x 7/16	-	3/8	1

TABLE 226 — EYE - 9G14

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	EYE: INSIDE DIAMETER	THREAD: DIAMETER	WASHER: LENGTH AND WIDTH	QUANTITY
5	14E1-	Iron	Incomp	7 3/8 (R)	15/16 x 3/16	11/16	NA	NA	1

TABLE 227 — HINGE - 9G14

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	MINIMUM WIDTH	THICKNESS	NUMBER PER SIDE AND DIAMETER OF FASTENING HOLES	COUNTERSINKING	HOLE ARRANGEMENT	T PLATE: LENGTH	MEDIAN: WIDTH	JOINT: LENGTH	SOCKET: INSIDE DIAMETER	QUANTITY
Ind	14J1-82	Iron	Comp	2 3/8	1 11/16	NA	1/16	3, 3/16 - 7/32	Front	Offset	NA	NA	NA	NA	1
	14J1-83	Iron	Frag	1 3/4 (R)	1 3/32 (tml)	NA	1/8	1, 3/16	Front	Ind	NA	NA	NA	NA	1

Similar in form to Variation 13 although it is possibly machine made. Two wrought nails in place.

Cast; probably a butt hinge although not enough remains to determine which Variation.

TABLE 228 | SCREW - 9G14

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY
1	14A1-22	Iron	Comp	2 1/4	1
	14J1-72	Iron	Comp	1 9/16	1
	14J1-73	Iron	Comp	2	1
	14J1-74	Iron	Comp	2 1/32	1
	14J1-75	Iron	Comp	2 1/2	1
	14J1-76	Iron	Comp	2 1/2	1
	14J1-77	Iron	Comp	3 7/8	1
	14J1-78	Iron	Comp	4	1
	14J1-79	Iron	Comp	4 1/16	2
	14J1-80	Iron	Comp	4 1/16	1
	14J1-81	Iron	Comp	Ind	1
3	14B1-39	Iron	Comp	2 3/8	1
	14B1-40	Iron	Comp	4	1
Ind	14B1-41	Iron	Comp	Ind	1

TABLE 229 SCREW NAIL - 9G14

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY
1	14J1-75	Iron	Comp	2 1/2	1

TABLE 230 STAPLE - 9G14

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	INSIDE WIDTH	BAR: MAXIMUM CROSS SECTION	SHOULDER HEIGHT	PLATE LENGTH	PLATE WIDTH	PLATE THICKNESS	QUANTITY
11	14J1-84	Iron	Incomp	-	3 1/2	1/2 x 3/16	NA	NA	NA	NA	1

TABLE 231 THUMB LATCH, BAR - 9G14

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	MAXIMUM WIDTH	MINIMUM WIDTH	THICKNESS	PIVOT END			HANDLE		QUANTITY
								WIDTH	THICKNESS	HOLE: DIAMETER	LENGTH	DIAMETER	
2	14J1-85	Iron	Comp	7 3/8	3/4	5/16	5/16	5/8	1/8	-	NA	NA	1
	Wear mark 13/16" from catch end indicates possible location of guide.												

TABLE 232 WASHER - 9G14

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH AND WIDTH or DIAMETER	THICKNESS	HOLE: DIAMETER or LENGTH AND WIDTH	FASTENING HOLE: DIAMETER		QUANTITY
1	14J1-69	Iron	Comp	3/4	1/16	5/16	NA		1
	14J1-70	Iron	Comp	1	3/32	1/2	NA		1
	Slightly dished.								
	14J1-70	Iron	Comp	1 3/8	3/32	1/2	NA		1
2	14J1-86	Iron	Comp	3 1/2 x 1 15/16	7/32	13/32	-		1

TABLE 233 NAIL DISTRIBUTION (Variation and Length) — 9G14

Length \ Variation	A1	A2	A3	A4	A5	A6	A11	A26	A29	A30	A33	A52	A69	A70	A94	B1	B6	B8	C1
3/4																			
1																			
1/4								1											
1/2									1		1						1		
3/4																			
2																			
1/4																	1		
1/2																			
3/4							1										1		
3		1		1													1		
		1		1													1		
1/4				2	1														
1/2				3															
3/4				1								1							
				1															
4				2															
1/4				4															
		1		2															
1/2				3	1														
				3	1														
3/4		1	2	1															
		1																	
5																			
1/4				1									1						
1/2																			
3/4				1															
6																			
1/4																			
1/2																			
3/4													1	1					
7																			
1/4			1										1						
1/2																			
3/4																			
8																			
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate																			
TOTAL	4	5	3	26	3	15	1	1	1	3	1	1	3	1	2	2	5	1	1

TABLE 233 (cont.) NAIL DISTRIBUTION (Variation and Length) — 9G14

Length \ Variation	C2	C4	C5	D10	TOTAL
3/4					
1					
1/4				2	3
1/2				1	2
3/4	1				1
2					
1/4	4				5
1/2	11				11
3/4	11				11
3	14				14
1/4	7				9
1/2	7				2
3/4	16				9
4	7				18
1/4	1				10
1/2					1
3/4					3
5	1				2
1/4	3				1
1/2	1				4
3/4	6				3
6	1				6
1/4	2				5
1/2	5				5
3/4	5				9
7	2				9
1/4	2				6
1/2	1				3
3/4					1
8	2				2
1/4	3				5
1/2	2				2
3/4					
9	1				2
1/4					
1/2					
3/4					
10	2		1		2
1/4	6				7
1/2	13		1		14
3/4	9				9
11	2				2
1/4	1				2
1/2					1
3/4					
7					
1/4					1
1/2					1
3/4					
8					
1/4					
1/2					
3/4					
9					
1/4					
1/2					
3/4					
10					
1/4					
1/2					
3/4					
11					
1/4					
1/2					
3/4					
Indeterminate					
TOTAL	149	8	2	3	

Stone Barracks (9G15; Fig. 48: structure 15)

The building was constructed in 1813-14 and stood until 1872 when it was sold and removed from the site. Extensive repairs had already been undertaken by 1819 and others were made in 1837-38. By 1871 it had deteriorated considerably and begun to fall down.

Construction during period II is reflected in the high frequency wrought nails (90.1 per cent; Table 29). Repairs during period III are possibly reflected in the quantity of cut nails present (143; Table 29) although it is likely that wrought nails were still preferred at this time. The time of construction is further confirmed by the presence of nine cast hinges, from a total of 12, and an absence of the general H-HL form (Table 239). The cast hinges are not complimented by a large number of screws. Although shutters are mentioned in Folan and Ingram's report, only two parts of shutter dogs are present (Table 244). It is likely that a considerable amount of the hardware was salvaged during the long period that the building was unoccupied. Folan and Ingram include mention of an evaluation of the building made in 1868 which reports the presence of shutters leaning against the outside wall. If these items are from the building in question it is also probable that pieces of hardware were removed as the need arose.

TABLE 234 BOLT - 9G15

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	THREAD: DIAMETER		QUANTITY
13	15A1-130	Iron	Comp	5 1/8	1/4	-		1
15	15A1-131	Iron	Comp	9 15/16	1/2	-	Diameter at constriction 3/8".	1
16	15F3-206	Iron	Comp	2 13/16	11/32	3/8		1
17	15F3-211	Iron	Comp	4 1/2	1/2	15/32		1
18	15J3-251	Iron	Comp	4 5/8	17/32	3/8		1
Ind	15P5-39	Iron	Frag	Ind	Ind	Ind		1
	NUT: Variation 1; 3/4" sq. x 3/16"; hole 5/16".							
	15U3-27	Iron	Frag.	Ind	5/8	-		1
	End of thread has been squared and partly tapered.							
	15V3-19	Iron	Frag	Ind	5/32	-		1

TABLE 235 NUT - 9G15

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH AND WIDTH or DIAMETER	THICKNESS	HOLE: DIAMETER	QUANTITY
1	15J3-250	Iron	Comp	1 9/32 sq.	7/16	1/2	1

TABLE 236 — DOOR LOCK - 9G15

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	HOUSING: LENGTH	HOUSING: MAXIMUM WIDTH	HOUSING: MINIMUM WIDTH	HOUSING: PLATE: THICKNESS		QUANTITY
2	15A1-126	Iron	Incomp	6 3/4	4	3	1/16		1
	Lock bolt and cover plate are missing.								
	15K3-71	Iron	PART Comp	NA	NA	NA	NA		1
	Consisting only of a lock bolt; length 5 13/16". Possible crossmend with 15A1-126.								
	15M3-514	Iron	PART Comp	NA	NA	NA	NA		1
	Consisting only of a cover plate. Possible crossmend with 15A1-126								
Ind	15A1-127	Iron	PART Comp	NA	NA	NA	NA		1
	Consisting only of a tumbler for either Variation 1 or 2.								
	15A1-129	Iron	PART Comp	NA	NA	NA	NA		1
	Consisting only of a cover plate; possible Variation 3.								
	15Z1-360	Iron	PART Comp	NA	5 9/16	Ind	1/4 - 1/8		1
	Consisting only of the end plate of a housing; possible Variation 1 or 3.								

TABLE 237 — DOOR LOCK, KEY ESCUTCHEON - 9G15

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	THICKNESS	KEY HOLE: LENGTH	FASTENING HOLE: DIAMETER		QUANTITY
1	15Z1-353	Iron	Par	2 13/16	1 3/16 (tml)	1/16	1 5/8	1/8		1

TABLE 238 — GATE HOOK - 9G15

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	HOOK: LENGTH	EYE: INSIDE DIAMETER		QUANTITY
3	15N3-638	Iron	Comp	5 9/16	1/4 sq.	15/16	3/8		1
	SWINGING EYE: Variation 3; length 2 3/4"; eye inside diameter 3/8"; edges of shank bevelled.								
5	15Z1-358	Iron	Comp	6 7/8	7/16	1 7/8	19/32		1

TABLE 239 HINGE - 9G15

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	MINIMUM WIDTH	THICKNESS	NUMBER PER SIDE AND DIAMETER OF FASTENING HOLES	COUNTERSINKING	HOLE ARRANGEMENT	T PLATE: LENGTH	MEDIAN: WIDTH	JOINT: LENGTH	SOCKET: INSIDE DIAMETER	QUANTITY
1	15B14-8	Iron	Par	3 31/32	1 7/16 (tml)	NA	7/32 - 3/16	4, 1/4	F&B	Offset	NA	NA	NA	NA	1
	Three screws in place; Variation 1; length 31/32" (same as 15B14-7).														
	15F4-13	Iron	Par	2	11/16 (tml)	NA	1/8	2, 3/16	Front	Linear	NA	NA	NA	NA	1
	15J3-252	Iron	Par	2 1/4	13/16 (tml)	NA	1/8	3, 3/16	Front	Linear	NA	NA	NA	NA	1
	15M3-515	Iron	Par	1 1/8	1 7/16 (tml)	NA	3/32	3, 1/4	Front	Triang	NA	NA	NA	NA	1
	15Z1-351	Iron	Frag	2 1/16 (R)	1 1/16 (tml)	NA	5/32	2, 1/4	F&B	Ind	NA	NA	NA	NA	1
2	15H3-254	Iron	Par	2 15/16 (R)	1 1/8 (tml)	NA	5/32	3, 1/4	Front	Linear	NA	NA	NA	NA	1
5	15F3-209	Iron	Incomp	7 (R)	1 3/4 & 2 1/8	-	1/8	3 & 2, 7/32-1/4	Abs	Triang	NA	NA	NA	NA	1
	The ends on both sides are missing.														
Ind	15E3-136	Iron	Frag	2 1/2 (R)	15/16	-	11/32	0	Ind	Ind	NA	NA	NA	3/4	1
	Possible Variation 15.														

TABLE 239 (cont.) HINGE - 9G15

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	MINIMUM WIDTH	THICKNESS	NUMBER PER SIDE AND DIAMETER OF FASTENING HOLES	COUNTERSINKING	HOLE ARRANGEMENT	T PLATE: LENGTH	MEDIAN: WIDTH	JOINT: LENGTH	SOCKET: INSIDE DIAMETER	QUANTITY
	15E3-137	Iron	Incomp	3 1/2 (R)	1 1/8	1/2 (R)	1/16	2, 3/16	Abs	Ind	NA	NA	NA	NA	1
	Possible Variation 7.														
	15P5-40	Iron	Frag	1 3/16 (R)	15/16 (tml)	NA	1/8	1, 1/4	Front	Ind	NA	NA	NA	NA	1
	Cast; possible Variation 1, 2, or 3.														
	15P5-41	Iron	Par	2 1/4 (R)	7/8 (tml)	NA	1/8	2, 3/16	Front	Ind	NA	NA	NA	NA	1
	Possible Variation 3.														
Ind	15Z1-352	Iron	Frag	5/8 (R)	3/4(R)(tml)	NA	1/8	1, 7/32	Front	Ind	NA	NA	NA	NA	1
	Possible Variation 1, 2, or 3.														

TABLE 240 | KEY - 9G15

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	BOW		STEM		PIN		BIT			COLLAR: DIAMETER	QUANTITY
					LENGTH	WIDTH	LENGTH	DIAMETER	LENGTH	DIAMETER	LENGTH	WIDTH	THICKNESS		
3	15I3-45	Iron	Incomp	2 1/4 (R)	Ind	1 1/16	1 3/4	1/4	NA	NA	5/16	3/8	1/8	NA	1
	15N3-637	Iron	Incomp	2 3/4	3/4	1 1/8	2	1/4	NA	NA	5/16	3/8	1/8	NA	1
5	15D3-85	Iron	Incomp	-	3/4	1 1/8	1 1/4	3/8	NA	NA	5/16	5/16	1/8	NA	1
	15E3-135	Iron	Incomp	1 3/4 (R)	3/4	15/16	1 (R)	1/4	NA	NA	Ind	Ind	Ind	NA	1

TABLE 241 | PADLOCK - 9G15

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	HOUSING				BOW: MAXIMUM CROSS SECTION		QUANTITY
				LENGTH	WIDTH	THICKNESS	PLATE: THICKNESS			
1	15P5-42	Iron	Frag	3 1/16	1 3/8 (R)	Ind	3/32	Ind		1
	Consisting only of part of the front plate with a brass escutcheon..									

TABLE 242

RIVET - 9G15

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	MAXIMUM CROSS SECTION	HEAD: DIAMETER	WASHER: LENGTH AND WIDTH	QUANTITY
2	15Z1-348	Iron	Comp	1 3/4	-	-	-	1

TABLE 243

SCREW - 9G15

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY	VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY
1	15B14-7	Iron	Comp	15/16	1						
	15Z1-357	Iron	Comp	1 1/8	1						

Same as screws in 15B14-8.

TABLE 244 — SHEETING - 9G15

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	MAXIMUM REMAINING DIMENSION		QUANTITY
Roof	15P5-43	Iron	Frag	-		1
	One wrought nail in place; head - rose; shank - squared, bevelled edges; point - sharp; length 1 1/8".					
Copper	15B5-45	NA	Frag	7 1/2 x 4 13/16		1
	One unidentified fastening still in place.					

TABLE 245 — SHUTTER DOG - 9G15

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	CATCH				ANCHOR		QUANTITY
				LENGTH	LOOP: DIAMETER	MAXIMUM WIDTH	MAXIMUM THICKNESS	LENGTH	MAXIMUM CROSS SECTION	
2	15B4-38	Iron	Par	Ind	Ind	Ind	1/4	6	7/16 sq.	1
	Most of the catch is missing.									
Ind	15Z1-361	Iron	Par	Ind	Ind	Ind	Ind	5 1/2 (R)	7/16 sq.	1
	Consisting of an anchor only - similar to anchor of Variation 1. Possible crossmends: 9K2-5, 51A1-158, 51A3-24.									

TABLE 246 SLIDING BOLT - 9G15

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	BOLT				PLATE				QUANTITY
				LENGTH	MAXIMUM CROSS SECTION	HANDLE		LENGTH	WIDTH	THICKNESS	NUMBER AND DIAMETER OF FASTENING HOLES	
						DIAMETER	HEIGHT					
2	15K3-70	Iron	PART Incomp	Ind	Ind	Ind	Ind	7 1/2 (R)	1 1/16	1/16	4, 3/16	1
	Consisting only of an incomplete back plate.											
3	15G3-	Iron	Comp	9 3/4	7/16 x 1/4	15/16	1 1/2	4 9/16	1 1/2	1/16	4, 1/4	1
Ind	15F3-210	Iron	Par	5 1/8 (R)	1/2 x 1/4	Ind	Ind	Ind	Ind	Ind	Ind	1
	Consisting only of an incomplete bolt; possible Variation 2 or 6.											
	15Z1-347	Iron	Frag	Ind	9/16 x 5/16	1 5/16	Ind	Ind	Ind	Ind	Ind	1
	Consisting only of a bolt fragment, broken at the heel; similar to bolt of Variation 2.											

TABLE 247 STAPLE - 9G15

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	INSIDE WIDTH	BAR: MAXIMUM CROSS SECTION	SHOULDER HEIGHT	PLATE LENGTH	PLATE WIDTH	PLATE THICKNESS	QUANTITY
7	15Z1-350	Iron	Incomp	3 11/16	1	13/16 x 1/8	11/16	NA	NA	NA	1
10	15Z1-349	Iron	Comp	3 7/16	5/8	3/8 x 1/8	1 9/16	NA	NA	NA	1
11	15H3-252	Iron	Par	1 1/16 (R)	1 3/4	7/16 x 1/8	3/8	NA	NA	NA	1

TABLE 248 THUMB LATCH, BAR - 9G15

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	MAXIMUM WIDTH	MINIMUM WIDTH	THICKNESS	PIVOT END WIDTH	PIVOT END THICKNESS	PIVOT END HOLE: DIAMETER	HANDLE LENGTH	HANDLE DIAMETER	QUANTITY
Ind	15M2-24	Iron	Incomp	Ind	Ind	Ind	Ind	Ind	Ind	Ind	1 3/8	13/16	1

Consisting only of a knob handle such as found on Variation 3.

TABLE 249

THUMB LATCH, CATCH - 9G15

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	SHANK: MAXIMUM CROSS SECTION	HOOK: LENGTH	HOOK: HEIGHT	REINFORCING SHANK: LENGTH	REINFORCING SHANK: DISTANCE FROM HOOK	PLATE: LENGTH	PLATE: WIDTH	NUMBER AND DIAMETER OF FASTENING HOLES	QUANTITY
Ind	15Z1-356	Iron	Incomp	1/4 sq.	5/8	9/32	NA	NA	NA	NA	NA	1

Possible Variation 1 or 2.

TABLE 250

THUMB LATCH, HANDLE - 9G15

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	HANDLE: LENGTH	HANDLE: RISE	HANDLE: MAXIMUM WIDTH	HANDLE: DIAMETER	CUSP: WIDTH	LIFT BAR: LENGTH	NUMBER AND DIAMETER OF FASTENING HOLES	PLATE: WIDTH	PLATE: THICKNESS	QUANTITY
2	15M3-516	Iron	Par	Ind	4 5/16	1 11/16	NA	5/16	NA	Ind	Ind	Ind	Ind	1

Consisting only of a handle without its back plate.

TABLE 251 NAIL DISTRIBUTION (Variation and Length) — 9G13

Length \ Variation	A1	A2	A3	A4	A5	A6	A11	A12	A13	A14	A15	A23	A26	A28	A29	A30	A31	A33	A34
3/4																	1		
1		1																	
		1															2		
1/4		2		2													13		
		7											1	1			16		
1/2		2		1	1								3				18		
		5		1	1				1								1		
3/4		2								1							1		
		5			1				1										
2		6			1				1				1						
		7		1	1														
1/4		8			2		1										2		1
		8			4												1		1
1/2		17			3														1
		31		3	4														1
3/4		16		1	4		1			1									
		23		2	5		1			2					1			4	1
3		29	1	3	5		1			1			1				1	3	
		25	2	2	5		1						1						1
1/4		34		2	6					2									
		17		2	5										1			1	
1/2		14	2	3	2		1								1				
		17			4														
3/4		19		2	5		1		1										
		22	1	3	5		2												
4		21		2	7					1									
		16	3	3	5					1		1			1				
1/4		21	5	6	4			1	3										
		17	3	2	4								1	1					1
1/2		15	5	3	3														
		21	8	4	2		1	1											
3/4		13	12					1	1										
		11	7	1															
5		3	3	2															
			1	1															
1/4		3	1																
		2	1	1	1														
1/2		3	1	1															
			1																
3/4																			
		1																	
6			1																
1/4			1																
			2																
1/2																			
3/4																			
7																			
1/4																			
1/2																			
3/4			1																
8																			
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate		2																	
TOTAL	284	467	62	54	90	301	10	3	8	9	4	1	8	2	4	2	56	8	6

TABLE 251 (cont.) NAIL DISTRIBUTION (Variation and Length) — 9G13

Length \ Variation	A35	A37	A48	A50	A52	A53	A54	A59	A61	A62	A63	A64	A68	A69	A70	A71	A72	A74	A77
3/4																			
1																			
1/4								1		1		2							
1/2				1				2		1		1							
3/4								1											
2																			
1/4								1											
1/2					2	1		1	2	1									
3/4			1		2	4													
3					4	1		1		1									
1/4						1			1	3									1
1/2										1									1
3/4									1	1									
4		1				1				1									4
1/4								1											1
1/2		1																	1
3/4								1						1		1			2
5														1					1
1/4														1					
1/2														1	1				
3/4														1					
6				1															
1/4																1			
1/2															1			1	
3/4																			
7													1	1					
1/4														4	2				
1/2																			
3/4													1						
8														1					
1/4														1					
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate																			
TOTAL	2	2	1	2	8	8	3	9	4	10	30	3	2	12	4	2	4	1	11

TABLE 251 (cont.) NAIL DISTRIBUTION (Variation and Length) —9G15

Length \ Variation	A78	A79	A80	A81	A86	A87	A88	A89	A92	A93	A94	A95	A96	A114	A118	B1	B5	B6	B7
3/4																			
1																			
1/4					1														
1/2					1													1	
3/4													1						
2							1											1	
1/4														1			1	1	1
1/2		1															1	1	
3/4																	1	2	1
3																		2	2
1/4		1						1	1								1	5	
1/2	1	2	1															3	1
3/4		1	1														1	8	2
4		1	1						1								1	3	1
1/4	3	2	1							1		1					1	3	1
1/2	1		1						1									3	
3/4	1	4	1										1					4	1
5	4	4	3										1				1	1	1
1/4	8	4	1									1	1						
1/2	3	3								1		3							
3/4	4	3	1			1						4							
6	2												1						
1/4	1		1																
1/2	1																		
3/4	2																		
7																			
1/4																			
1/2																			
3/4																			
8																			
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate														1					
TOTAL	31	27	13	60	2	1	1	1	3	2	12	9	5	2	11	15	8	41	12

TABLE 251(cont.) NAIL DISTRIBUTION (Variation and Length) — 9G15

Length \ Variation	B8	C1	C2	C3	D3	D4	D5	TOTAL
3/4								1
1								1
1/4								3
1/2								21
3/4								30
2								29
1/4								11
1/2								5
3/4								8
3								11
1/4								12
1/2								17
3/4								21
4								28
1/4								49
1/2								34
3/4								47
5								49
1/4								53
1/2								51
3/4								31
6								33
1/4								23
1/2								36
3/4								44
7								36
1/4								38
1/2								46
3/4								40
8								42
1/4								52
1/2								39
3/4								33
9								10
1/4								4
1/2								7
3/4								7
10								7
1/4								1
1/2								
3/4								1
11								2
1/4								
1/2								1
3/4								3
								2
								2
								6
								1
								1
								1
								1
Indeterminate								3
TOTAL	82	1	5	2	1	1	1	

Commissariat Officer's Quarters-Church (9G17; Fig. 48: structure 17)

Construction was probably undertaken in 1816 following the granting of permission for construction of such a building. In 1834 it was rented as a church to the local protestant congregation. The congregation eventually erected its own church and used the above building only as a burial chapel. By 1867 the building was abandoned and in 1870 it was destroyed by fire with the remains sold in 1872.

A total of five items (Tables 252-254), other than the nails (Table 255), does not constitute an adequate basis for discussion. Although the building was burned, it is evident that salvaging of hardware took place in the years that the building stood vacant. This situation is similar to that of the Octagonal Blockhouse and in contrast to that of the Commanding Officer's Quarters both of which were also burned. The frequency of cut nails (54.9 per cent; Table 29) and the quantity of these in the range of 1 1/8 in. to 1 3/4 in. (variations B6 and B7; Table 254) suggest extensive repair or alteration. Such nails could have been used for a new shingle roof or lath for plastering, possibly when the building was taken over for a church.

TABLE 252 DOOR LOCK, KEEPER - 9G17

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	DEPTH	PLATE: THICKNESS	STRIKER BAR: WIDTH	STRIKER BAR: HEIGHT	STRIKER BAR: THICKNESS	HOLE: DIAMETER	QUANTITY
4	17D1-	Iron	Incomp	5 1/2	2 3/8	1 5/16	3/32	NA	3/4	NA	1/4 & 5/16	1

TABLE 253 HINGE - 9G17

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	MINIMUM WIDTH	THICKNESS	NUMBER PER SIDE AND DIAMETER OF FASTENING HOLES	COUNTERSINKING	HOLE ARRANGEMENT	T PLATE: LENGTH	MEDIAN: WIDTH	JOINT: LENGTH	SOCKET: INSIDE DIAMETER	QUANTITY
3	17D1-34	Iron	Incomp	4 1/2	1 11/16 (tml)	NA	3/16 - 1/4	5, 1/4 - 9/32	F&B	Offset	NA	NA	NA	NA	1
16	17D1-32	Iron	Comp	10 3/4	1 1/4	1/2	1/8 - 5/16	4, 3/16	Front	Linear	NA	NA	NA	NA	1
Ind	17D1-33	Iron	Incomp	-	1 3/16 (R)	1/4 (R)	1/16 - 1/8	3, 5/32	Abs	-	NA	NA	NA	NA	1

Possible Variation 7.

TABLE 254 | PINTLE - 9G17

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	SHANK			PIN		WING: MAXIMUM WIDTH	NUMBER AND DIAMETER OF FASTENING HOLES	REINFORCING ARM		QUANTITY
				LENGTH	MAXIMUM CROSS SECTION	WIDTH AT SHOULDER	LENGTH	MAXIMUM DIAMETER			LENGTH	MAXIMUM CROSS SECTION	
Ind	17C1-36	Iron	Incomp	-	5/8 x 1/2	NA	1	7/16	NA	NA	NA	NA	1
	Possible Variation 1 or 2. Point missing; barbs on shank toward the point.												

TABLE 255 NAIL DISTRIBUTION (Variation and Length) — 9617

Length \ Variation	A1	A2	A3	A4	A5	A6	A11	A13	A14	A15	A26	A29	A33	A35	A63	A66	A69	A70	A72
3/4																			
1					1														
1/4		2		2	1														
1/2		6 11		6	2														
3/4		10		8 4	1		2				1								
2		1		3 6			1 1	3 5								1			
1/4		4		1	1		2		1										
1/2		1		2 1			1	1											
3/4		3		4	2			2											
3		1 4		4 6	1			1											
1/4		6 4		4 7				1											
1/2		1 1		12 9	1			3 2											
3/4		1 1		18 19				2 1											
4		3 2		15 9	1														
1/4		2	1	2 1	1		1												
1/2		1 5		2 7 5								1							
3/4		1		7 8	1														
5		1 1		4	1								1				1		
1/4		1		4 3	1												1		
1/2				1 2														2	1
3/4				1														1	
6																			
1/4																			
1/2																			
3/4																			
7																			
1/4																			
1/2																			
3/4																			
8																			
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate																			
TOTAL	54	74	1	191	15	67	8	21	1	7	1	1	1	1	1	1	1	4	1

TABLE 255 (cont.) NAIL DISTRIBUTION (Variation and Length) – 9G17

Length \ Variation	A73	A79	A90	A94	A96	A118	B1	B6	B7	B8	B14		TOTAL
3/4													
1								8	1				10
1/4								23	2				27
1/2								21	15				45
3/4								154	68				241
2								57	18				94
1/4					1			2			1		9
1/2													7
3/4									2				14
3								1	1				13
1/4								2					8
1/2								5					13
3/4								2					15
4													14
1/4													16
1/2													13
3/4													21
5													21
1/4													18
1/2													12
3/4													5
6													1
1/4		1											4
1/2	1	1											8
3/4		1											11
7													7
1/4													10
1/2													6
3/4													7
8													4
1/4													2
1/2													2
3/4													2
9													
1/4													1
1/2													1
3/4													3
10													2
1/4													1
1/2													
3/4													
11													
1/4													
1/2													
3/4													
Indeterminate													
TOTAL	1	3	1	1	1	1	26	275	107	110	1		

Temporary Bakehouse and Canteen (9G18 and 9G19; Fig. 48: structures 18 and 19)

No firm date for construction can be provided. The building appears on the site plan of 1814 but is absent from the plan of 1815. Folan and Ingram suggest three possible dates for its construction: "It was probably constructed to serve as the bakehouse and canteen for the increased garrison at the beginning of the war or for the construction gang on the site 1813-14. It may also have been an older building converted to this purpose until it could be replaced".

A total of six items (Tables 252-260, 262), other than the nails (Tables 261, 263) does not constitute an adequate basis for discussion. The frequency of wrought nails (98.8 per cent to 100 per cent; Table 29) could suggest construction either during period I or II.

TABLE 256 — BOLT - 9G18

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	THREAD: DIAMETER	QUANTITY
3	18B1-136	Iron	Comp	4 3/8	7/16	15/32	1

TABLE 257 — NUT - 9G18

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH AND WIDTH or DIAMETER	THICKNESS	HOLE: DIAMETER	QUANTITY
1	18B1-137	Iron	Comp	13/16 sq.	5/16	5/16	1

Edges bevelled on one surface.

TABLE 258 — CLEVIS PIN - 9G18

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	DIAMETER	HOLE: LENGTH AND WIDTH	QUANTITY
Ind	18A1-57	Iron	Incomp	8 7/8 (R)	1/2	9/16 x 3/16	1

LYNCH PIN: Variation 1; length 1 3/4"; maximum cross section 3/16" x 1/8".

TABLE 259

HINGE - 9G18

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	MINIMUM WIDTH	THICKNESS	NUMBER PER SIDE AND DIAMETER OF FASTENING HOLES	COUNTERSINKING	HOLE ARRANGEMENT	T PLATE: LENGTH	MEDIAN: WIDTH	JOINT: LENGTH	SOCKET: INSIDE DIAMETER	QUANTITY
5	18Bl-134	Iron	Incomp	3 (R)	1 1/16	NA	1/8	1, 1/4	Abs	Ind	NA	NA	NA	NA	1

Ends of the pin have been riveted.

TABLE 260

STAPLE - 9G18

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	INSIDE WIDTH	BAR: MAXIMUM CROSS SECTION	SHOULDER HEIGHT	PLATE: LENGTH	PLATE: WIDTH	PLATE: THICKNESS	QUANTITY
Ind	18Bl-133	Iron	Incomp	4 (R)	1 3/8	3/8 x 5/16	NA	NA	NA	NA	1

Possible Variation 4 or 5.

TABLE 261 NAIL DISTRIBUTION (Variation and Length) — 9G18

Length \ Variation	A1	A2	A3	A4	A5	A6	A11	A15	A16	A25	A26	A29	A30	A31	A35	A36	A61	A62	A92
3/4																			
1																			
1/4		2									1			2		1			
1/2		5										1							
3/4		2									1					1			
2		3			2												1		
1/4		3			1														
1/2		4																	
3/4		2			2														
3		2		1	1				1										1
1/4		1		1	2														2
1/2		3		1							1								
3/4		7		2	1													1	
4		5			2														
1/4		7		1	1		1												
1/2		3	1	1					1										1
3/4		3	1																
5		4	1																
1/4		4	1																
1/2		3			1														
3/4		6																	
6		5	1																
1/4		3																	
1/2		3																	
3/4		3																	
7		1																	
1/4																			
1/2			1																
3/4																			
8																			
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate																			
TOTAL	49	101	6	10	13	79	1	2	2	1	3	1	6	2	1	2	1	1	4

TABLE 261 (cont.) NAIL DISTRIBUTION (Variation and Length) — 9 GI 8

Length \ Variation	A94	A95	A114	A115	B5	B8		TOTAL
3/4								
1								2
1/4								6
1/2								5
3/4								4
2								4
1/4			1					5
1/2								5
3/4				1				4
3								2
1/4								4
1/2								4
3/4					1			2
4								2
1/4								3
1/2		1						1
3/4		2						2
5								6
1/4		1						12
1/2								6
3/4								10
6								4
1/4								5
1/2								8
3/4								4
7								3
1/4								5
1/2								8
3/4								9
8								3
1/4								6
1/2								1
3/4								1
9								2
1/4								3
1/2								
3/4								1
10								
1/4								1
1/2								
3/4								
11								1
1/4								
1/2								
3/4								
Indeterminate								
TOTAL	3	4	1	1	1	2		

TABLE 262	THUMB LATCH, CATCH - 9G19												
						HOOK		REINFORCING SHANK		PLATE			
VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	LENGTH	HEIGHT	LENGTH	DISTANCE FROM HOOK	LENGTH	WIDTH	NUMBER AND DIAMETER OF FASTENING HOLES	QUANTITY
1	19A1-45	Iron	Comp	4 15/16	5/16 x 1/4	1 5/16	3/8	NA	NA	NA	NA	NA	1

TABLE 263 NAIL DISTRIBUTION (Variation and Length) – 9619

Length \ Variation	A1	A2	A4	A5	A6	A14	A30	A61	A81	A94	A95	A96		TOTAL
3/4														
1														
1/4			1											1
1/2														
3/4		1												1
2														
1/4		2	1											3
1/2		1	2											2
3/4			1											
3												1		1
1/4			1											1
1/2			1			1		1				1		4
3/4			2											2
4			3	1										4
1/4			5											5
1/2			2											2
3/4			2											2
			2											2
			1			1								2
			1											1
			1											2
			2											2
			1											1
			4								1	1		6
											1			1
5														
1/4			1											1
1/2														
3/4				1										1
			1											1
6														
1/4														
1/2														
3/4														
7														
1/4														
1/2														
3/4														
8														
1/4														
1/2														
3/4														
9														
1/4														
1/2														
3/4														
10														
1/4														
1/2														
3/4														
11														
1/4														
1/2														
3/4														
Indeterminate														
TOTAL	5	4	34	2	13	2	3	1	1	2	2	3		

Bridge Abutments (9G20; Fig. 48: structure 20)

A total of 20 artifacts, all nails (Table 264), is not adequate for any discussion and reflects the absence of a building in the area.

TABLE 264 NAIL DISTRIBUTION (Variation and Length) – 9G20

Length \ Variation	A1	A2	A6	A36	A69	A72	A78	A81	B7	D8		TOTAL
3/4												
1												
1/4		1								1		1
1/2				1								1
3/4												1
2												
1/4												
1/2		1										1
3/4									1			1
3												
1/4												
1/2		1										1
3/4												
4												
1/4												
1/2		1										1
3/4												
5												
1/4					1		1					1
1/2												1
3/4												
6												
1/4												
1/2												
3/4												
7												
1/4												
1/2												
3/4												
8												
1/4												
1/2												
3/4												
9												
1/4												
1/2												
3/4												
10												
1/4												
1/2												
3/4												
11												
1/4												
1/2												
3/4												
Indeterminate												
TOTAL	5	4	3	1	1	2	1	1	1	1		

Guard House (9G21; Fig. 48: structure 21)

The building was constructed by 1815 and survived in a relatively good state of repair until sold in 1872. No repairs are mentioned. After 1823 it was apparently little used although it is recorded in 1867 as being used as a residence.

The frequency of cut nails (18.6 per cent; Table 29) suggests some construction, repair or alteration, at a later date, possibly around 1867 when it was again in use. A crossmend with 9G39B1, of a thumb latch handle, should be noted.

TABLE 265 BOLT - 9G21

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	THREAD: DIAMETER		QUANTITY
2	21C1-21	Iron	Comp	4 3/8	1/2	-		1
	WASHER: Variation 1.							
3	21B1-32	Iron	Frag	-	1/2	Ind		1
8	21C1-20	Iron	Comp	12 1/4	5/8	5/8		1
	NUT: Variation 1; 1 1/16" sq. x 1/2". WASHER: 2 1/4" sq. x 1/4" (quantity 2).							

TABLE 266 GATE HOOK - 9G21

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	HOOK: LENGTH	EYE: INSIDE DIAMETER		QUANTITY
5	21B1-29	Iron	Incomp	4 3/4 (R)	1/4	Ind	1/2		1

TABLE 267 | HINGE - 9G21

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	MINIMUM WIDTH	THICKNESS	NUMBER PER SIDE AND DIAMETER OF FASTENING HOLES	COUNTERSINKING:	HOLE ARRANGEMENT	T PLATE: LENGTH	MEDIAN: WIDTH	JOINT: LENGTH	SOCKET: INSIDE DIAMETER	QUANTITY
1	21A1-37	Iron	Incomp	3 5/16	1 7/16 (tml)	NA	3/16	4, 1/4	F&B	offset	NA	NA	NA	NA	1

TABLE 268 | KEY - 9G21

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	BOW: LENGTH	BOW: WIDTH	STEM: LENGTH	STEM: DIAMETER	PIN: LENGTH	PIN: DIAMETER	BIT: LENGTH	BIT: WIDTH	BIT: THICKNESS	COLLAR: DIAMETER	QUANTITY
5	21C1-18	Iron	Comp	2	5/8	7/8	1 5/8	3/16	NA	NA	1/4	1/4	1/8	NA	1
	21C1-19	Iron	Comp	-	3/4	1 1/8	-	1/4	NA	NA	5/16	5/16	1/8	NA	1

TABLE 269 PINTLE - 9G21

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	SHANK				PIN			REINFORCING ARM				QUANTITY
				LENGTH	MAXIMUM CROSS SECTION	WIDTH AT SHOULDER	LENGTH	LENGTH	MAXIMUM DIAMETER	WING: MAXIMUM WIDTH	NUMBER AND DIAMETER OF FASTENING HOLES	LENGTH	MAXIMUM CROSS SECTION		
Ind	21C1-17	Iron	Incomp	-	7/8 sq.	NA	3 1/16	15/16	NA	NA	NA	NA	NA		1

Possible Variation 8 or 9. Shank barbed on two edges. End of pin bevelled. Stamped with a broad arrow.

TABLE 270 SCREW - 9G21

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY	VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	QUANTITY
Ind	21C1-22	Iron	Frag	Ind	1					

Possible Variation 1 or 3.

TABLE 271 SLIDING BOLT - 9G21

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	BOLT				PLATE					QUANTITY
				LENGTH	MAXIMUM CROSS SECTION	HANDLE DIAMETER	HANDLE HEIGHT	LENGTH	WIDTH	THICKNESS	NUMBER AND DIAMETER OF FASTENING HOLES		
1	21B1-28	Iron	Par	4 1/4 (R)	7/16 x 3/16	1 1/16	2 5/16	Ind	Ind	Ind	Ind		1

TABLE 272 STAPLE - 9G21

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	INSIDE WIDTH	BAR: MAXIMUM CROSS SECTION	SHOULDER HEIGHT	PLATE: LENGTH	PLATE: WIDTH	PLATE: THICKNESS	QUANTITY
4	21C1-16	Iron	Comp	3 3/8	1	3/8 x 5/16	NA	NA	NA	NA	1
5	21A1-36	Iron	Comp	2 13/16	5/8	1/2 x 7/16	NA	NA	NA	NA	1

TABLE 273 THUMB LATCH, HANDLE - 9G21

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	HANDLE: LENGTH	HANDLE: RISE	HANDLE: MAXIMUM WIDTH	HANDLE: DIAMETER	CUSP: WIDTH	LIFT BAR: LENGTH	NUMBER AND DIAMETER OF FASTENING HOLES	PLATE: WIDTH	PLATE: THICKNESS	QUANTITY
1	21A1-38	Iron	Incomp	-	4 3/8	1 7/16	11/16	NA	1 1/2	-	3/cusp, 3/16	NA	NA	1

Crossmends with 9G39B1-.

TABLE 274 NAIL DISTRIBUTION (Variation and Length) – 9G2I

Length \ Variation	A1	A2	A3	A4	A5	A6	A11	A13	A14	A15	A17	A19	A20	A27	A28	A30	A33	A36	A52
3/4																			
1																			
1/4																			
1/2		1													1			1	
3/4																			
2		1					1												
1/4																			
1/2		1																	1
3/4		1		1	1														1
3		1	1	1					1										1
1/4		1		1				1									1		
1/2		1		2			1												
3/4		5					1	1				1							
4		2			1				1										
1/4		2			1				2										
1/2		3			2														
3/4		3			1				1			1							
4		1	1		1							1							
1/4		1	1		2														
1/2		2	1		1							1							
3/4		1	1		1														
5		3	1																
1/4		3			1		1				1			1					
1/2		1	1				1												
3/4			1																
6			1				1												
1/4			1																
1/2							1												
3/4																			
7																			
1/4																			
1/2																			
3/4			1																
8			1																
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
indeterminate																			
TOTAL	31	34	11	5	9	61	6	2	5	1	1	3	2	1	1	2	1	1	3

TABLE 274 (cont.) NAIL DISTRIBUTION (Variation and Length) — 9G21

Length \ Variation	A61	A69	A70	A72	A74	A78	A79	A80	A81	A92	A93	A94	A95	A96	A97	A102	A114	A115	A116
3/4																			
1																			
1/4																			
1/2																	1		
3/4																			
2																	1		
1/4																			
1/2																			
3/4																			
3										1									
1/4										1									
1/2																	1		
3/4	1									1	1								
4						1				1									1
1/4													1					1	
1/2						2	1									1			
3/4			1			1	2						1	1					
5		2	2			2		1					1						
1/4		2				1							1						
1/2		1				1							1						
3/4		1				1													
6																			
1/4			1																
1/2					1														
3/4					2														
7		1			1														
1/4		1																	
1/2																			
3/4																			
8																			
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate																			
TOTAL	1	8	4	2	4	12	4	1	14	4	1	2	5	1	8	1	3	1	1

TABLE 274 (cont'd) NAIL DISTRIBUTION (Variation and Length) – 9G21

Length \ Variation	A118	B1	B2	B4	B6	B7	B8	B9	B12	B16	C2		TOTAL
3/4													
1					1								1
1/4													
1/2													1
3/4					1								2
2					1								2
1/4								1	1				2
1/2					2								3
3/4					1								2
3			1		5	2							3
1/4					6								1
1/2					1								1
3/4					1								1
4													13
1/4					1								9
1/2													6
3/4					1								8
5					1								5
1/4													6
1/2													7
3/4													3
6													2
1/4											1		5
1/2													7
3/4													5
7													6
1/4													8
1/2													8
3/4													7
8													6
1/4													9
1/2													4
3/4													2
9													3
1/4													1
1/2													1
3/4													1
10													1
1/4													1
1/2													1
3/4													2
11													1
1/4													1
1/2													1
3/4													1
Indeterminate													
TOTAL	10	5	1	2	23	2	21	1	1	3	1		

Bakehouse (9G22; Fig. 48: structure 22)

The building is presumed to have been erected some time in 1814-15 since it first appears on the plan of 1815. By 1819 part of it had already collapsed and was apparently repaired. By the 1820s there was probably little use for it and by 1857 it was reported to be in ruins. The remains were sold in 1872.

The high frequency of wrought nails (95.4 per cent; Table 29) is in agreement with the period of construction, although, the presence of only one cast hinge and two H-HL forms (Table 278) may indicate an earlier period of construction.

TABLE 275 — BOLT - 9G22

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	THREAD: DIAMETER		QUANTITY
11	22J1-14	Iron	Comp	6 5/8	3/8	-		1
	NUT: Variation 4 : 5/8" sq. x 5/16". WASHER: flat, square.							

TABLE 276 — DOOR LOCK - 9G22

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	HOUSING: LENGTH	HOUSING: MAXIMUM WIDTH	HOUSING: MINIMUM WIDTH	HOUSING: PLATE: THICKNESS		QUANTITY
1	22P1-18	Iron	PART Comp	NA	NA	NA	NA		1
	Consisting only of a lock bolt; length 6 5/8".								
Ind	22A1-41	Iron	PART Comp	7 1/4	NA	NA	1/16 - 1/8		1
	Consisting only of one bottom plate with a brass slide handle for a sliding bolt.								
	22C1-	Iron	PART Incomp	4	3	-	1/16		1
	Consisting only of a main plate with part of a brass key escutcheon attached.								
	22J1-13	Iron	PART Comp	NA	NA	NA	NA		1
	Consisting only of a tumbler such as found in Variation 1 and 2.								
	22L2-30	Iron	PART Comp	5 1/8	NA	NA	1/16 - 1/8		1
	Consisting only of a side plate; possible Variation 1 or 3.								

TABLE 277

EYE - 9G22

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	EYE: INSIDE DIAMETER	THREAD: DIAMETER	WASHER: LENGTH AND WIDTH		QUANTITY
1	2G3-11	Iron	Incomp	4 1/8 (R)	1 1/8 x 3/4	1 1/4	NA	NA		1

TABLE 278 HINGE - 9G22

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	MINIMUM WIDTH	THICKNESS	NUMBER PER SIDE AND DIAMETER OF FASTENING HOLES	COUNTERSINKING	HOLE ARRANGEMENT	T PLATE: LENGTH	MEDIAN: WIDTH	JOINT: LENGTH	SOCKET: INSIDE DIAMETER	QUANTITY
1	22K1-21	Iron	Par	1 7/8 (R)	1 (tml)	NA	3/16	2, 1/4	F&B	Linear	NA	NA	NA	NA	1
Ind	22A1-39	Iron	Incomp	6 11/16 (R)	1 7/16	-	3/32	3 & 1, 1/8	Ind	-	NA	NA	NA	NA	1
	Possible Variation 7.														
	22A1-40	Iron	Incomp	5	15/16 (tml)	NA	1/16	4, 3/16	Abs	Linear	NA	3/16	1 5/8	NA	1
	Possible Variation 8 or 9.														
	22F1-18	Iron	Incomp	7 1/16	1 1/8 (tml)	NA	3/32	5, 7/32	Abs	Linear	NA	3/16	2 1/16	NA	1
	Possible Variation 8 or 9.														
	22F1-19	Iron	Par	4 7/8 (R)	3/4 (R)	5/8	3/16	2, 1/4	Abs	Ind	NA	NA	NA	NA	1
	Possible Variation 13.														
	22H1-19	Iron	Frag	5 15/16 (R)	1 3/8 (R)	13/16 (R)	1/4	2, Ind	Ind	Ind	NA	NA	NA	NA	1
	Possible Variation 13, 14, 16, 17, or 18.														

TABLE 279 PINTLE - 9G22

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	SHANK			PIN		WING: MAXIMUM WIDTH	NUMBER AND DIAMETER OF FASTENING HOLES	REINFORCING ARM		QUANTITY
				LENGTH	MAXIMUM CROSS SECTION	WIDTH AT SHOULDER	LENGTH	MAXIMUM DIAMETER			LENGTH	MAXIMUM CROSS SECTION	
Ind	22K2-4	Iron	Incomp	3 3/4 (R)	9/16 x 5/16	NA	1 7/8	1/2	NA	NA	NA	NA	1

Possible Variation 8 or 9.

TABLE 280 STAPLE - 9G22

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	INSIDE WIDTH	BAR: MAXIMUM CROSS SECTION	SHOULDER HEIGHT	PLATE			QUANTITY
								LENGTH	WIDTH	THICKNESS	
6	22G2-30	Iron	Incomp	4 1/2	1 3/4	15/32 x 1/4	NA	NA	NA	NA	1
8	22F1-17	Iron	Incomp	2 1/2 (R)	2 1/8	5/16 x 3/16	NA	NA	NA	NA	1
10	22L1-15	Iron	Incomp	1 7/8 (R)	1/2	5/8 x 3/16	13/16	NA	NA	NA	1

TABLE 281 — SHUTTER DOG - 9G22

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	CATCH				ANCHOR		QUANTITY
				LENGTH	LOOP: DIAMETER	MAXIMUM WIDTH	MAXIMUM THICKNESS	LENGTH	MAXIMUM CROSS SECTION	
Ind	22K1-22	Iron	PART Incomp	Ind	Ind	Ind	Ind	Ind	3/8 sq.	1

Consisting only of an incomplete anchor.

TABLE 282 NAIL DISTRIBUTION (Variation and Length) — 9G22

Length \ Variation	A1	A2	A3	A4	A5	A6	A13	A15	A26	A28	A29	A30	A47	A61	A63	A69	A70	A72	A73
3/4																			
1																			
1/4									1		1								
1/2		1		2	1														
3/4		1		1	1					1									
		1																	
2				3															
				1															
1/4				2	1		1												
					1														
1/2				2			1												
		1		1															
3/4			1	4	1														
				1															
3				3	2								1						
				4	1														
1/4				6	3														
				3															
1/2				4	1														
				6	1														
3/4				5															
					2		1												
4		1	1	5	1														
			1	4															
1/4			1	5										1					
			1	4															
1/2			1	1															2
		2	1	2	1														1
3/4		1	2	2	1														
			1	2	1														
5				1															1
			1	1													1		
1/4				1															
																1			
1/2																2			
			1	1															
3/4																			
6																			
1/4																			
1/2																			
3/4																			
7																			
1/4																			
1/2																1			
3/4																			
8																			
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate																			
TOTAL	125	8	11	77	19	218	3	2	1	1	1	6	1	1	8	4	1	3	4

TABLE 282 (cont.) NAIL DISTRIBUTION (Variation and Length) — 9G22

Length \ Variation	A79	A81	A88	A90	A92	A94	A95	A96	A115	A118	A119	B1	B6	B7	B8	C2		TOTAL
3/4																		
1																		
1/4																		2
1/2																		4
3/4														1				4 2
2																		3
1/4								1										1 5
1/2													1					1 4
3/4													1					2 7
3													3					1 9
1/4			1		1			1					1					9 10
1/2													1					3 5
3/4																		7 5
4																1		3 8
1/4																		5 7
1/2							1											5 5
3/4	1 1 1						2											8 9 5
5																		2
1/4																		3 1
1/2																		1 2
3/4																		2
6																		
1/4							1											1
1/2	1										1							1 1 1
3/4																		
7																		
1/4																		1
1/2																		
3/4																		
8																		
1/4																		
1/2																		
3/4																		
9																		
1/4																		
1/2																		
3/4																		
10																		
1/4																		
1/2																		
3/4																		
11																		
1/4																		
1/2																		
3/4																		
Indeterminate									1									1
TOTAL	4	5	1	1	1	7	4	2	1	2	1	2	7	1	10	1		

Barracks Master's Quarters (9G23 and 9G40; Fig. 48: structure 23)

The time of construction for this building is not known. It first appears on the plan of 1815 and again on the plan of 1834 after being omitted from the 1823 plan. It no longer appears on plans of the 1850s.

The high frequency of wrought nails (95 per cent; Table 29) could indicate construction either during period I or period II. However, the absence of cast hinges and presence of several H-HL forms (Table 286) favours the former. The small quantity of cut nails (4 per cent; Table 29) suggests that little or no construction took place on the building once such nails became available.

TABLE 283

DOOR LOCK - 9G23

Consisting only of a cover plate.

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	HOUSING				QUANTITY
				LENGTH	MAXIMUM WIDTH	MINIMUM WIDTH	PLATE: THICKNESS	
2	23B1-38	Iron	PART Incomp	NA	NA	NA	1/16	1

TABLE 284

DOOR LOCK, LOCK BOLT - 9G23

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY
1	23C1-31	Iron	Comp	8	1

TABLE 285

EYE - 9G23

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	EYE: INSIDE DIAMETER	THREAD: DIAMETER	WASHER: LENGTH AND WIDTH	QUANTITY
11	23C1-30	Iron	Incomp	7 1/8 (R)	7/8 x 1/8	1/2	NA	NA	1

TABLE 286 HINGE - 9G23

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	MINIMUM WIDTH	THICKNESS	NUMBER PER SIDE AND DIAMETER OF FASTENING HOLES	COUNTERSINKING	HOLE ARRANGEMENT	T PLATE: LENGTH	MEDIAN: WIDTH	JOINT: LENGTH	SOCKET: INSIDE DIAMETER	QUANTITY
9	23C1-32	Iron	Incomp	8 7/8	1 1/4 (tml)	NA	1/16	7, 1/4	Abs	Linear	NA	1/4(tml)	2 3/8	NA	1
10	23D1-20	Iron	Incomp	8 1/16	1 1/4 (tml)	NA	1/16	5, 1/4	Abs	Linear	NA	1/4(tml)	2 7/16	NA	1
16	23D1-77	Iron	Incomp	1 5/16 (R)	1 1/8	Ind	1/8	1, Ind	Abs	Ind	NA	NA	NA	9/16	1

TABLE 287 PINTLE - 9G23

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	SHANK			PIN		WING: MAXIMUM WIDTH	NUMBER AND DIAMETER OF FASTENING HOLES	REINFORCING ARM		QUANTITY
				LENGTH	MAXIMUM CROSS SECTION	WIDTH AT SHOULDER	LENGTH	MAXIMUM DIAMETER			LENGTH	MAXIMUM CROSS SECTION	
3	23A1-7	Iron	Comp	4 15/16	7/16 x 3/8	NA	1 11/16	5/16	NA	NA	NA	NA	1
7	23D1-19	Iron	Comp	8 1/8	7/8 x 3/4	NA	2 9/16	13/16	NA	NA	NA	NA	1

TABLE 288 — SHUTTER DOG - 9G23

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	CATCH: LENGTH	CATCH: LOOP: DIAMETER	CATCH: MAXIMUM WIDTH	CATCH: MAXIMUM THICKNESS	ANCHOR: LENGTH	ANCHOR: MAXIMUM CROSS SECTION	QUANTITY
Ind	23D1-75	Iron	PART Comp	NA	NA	NA	NA	6 7/8	13/32 sq.	1

Consisting only of an anchor; chisel point.

TABLE 289 — STAPLE - 9G23

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	INSIDE WIDTH	BAR: MAXIMUM CROSS SECTION	SHOULDER HEIGHT	PLATE: LENGTH	PLATE: WIDTH	PLATE: THICKNESS	QUANTITY
8	23D1-74	Iron	Incomp	1 9/16	Ind	13/32 x 3/16	NA	NA	NA	NA	1

TABLE 290 — WASHER - 9G23

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH AND WIDTH or DIAMETER	THICKNESS	HOLE: DIAMETER or LENGTH AND WIDTH	FASTENING HOLE: DIAMETER	QUANTITY
3	23B1-36	Iron	Comp	1 3/8	7/16	3/4	NA	1

TABLE 291 NAIL DISTRIBUTION (Variation and Length) — 9G23

Length \ Variation	A1	A2	A3	A4	A5	A6	A11	A14	A15	A19	A20	A30	A69	A71	A72	A78	A81	A94	A95
3/4																			
1																			
1/4																			
1/2																			
3/4		1																	
2																			
1/4		3																	
1/2																			
3/4		1 1			1		1												
3		1			1														
1/4		4 1																	
1/2		2 2		1				1											
3/4		4 4			3 1														
4		2 3	1	1	2					1									
1/4		5 3	1	1															
1/2		1 3																	
3/4		3 2	1													1			
5		1														1			1
1/4														1					
1/2													1						
3/4																			
6																			
1/4																			
1/2																			
3/4																			
7																			
1/4																			
1/2																			
3/4																			
8																			
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate																			
TOTAL	48	47	3	3	10	112	1	1	2	1	1	3	1	1	1	2	3	1	1

TABLE 291 (cont.) NAIL DISTRIBUTION (Variation and Length) – 9G23

Length \ Variation	A11A	A117	A118	B1	B4	B6	B8	B11	TOTAL
3/4									
1						1			1
1/4									
1/2									
3/4									1
2									
1/4									3
1/2	1								1
3/4						1			1 3
3									1 2
1/4		1							4 2
1/2						1			2 5
3/4	1								7 6
4									4 5
1/4									8 5
1/2									1 3
3/4									4 3 1
5									1 1
1/4									1
1/2									1
3/4									1
6									
1/4									
1/2									
3/4									
7									
1/4									
1/2									
3/4									
8									
1/4									
1/2									
3/4									
9									
1/4									
1/2									
3/4									
10									
1/4									
1/2									
3/4									
11									
1/4									
1/2									
3/4									
indeterminate	1								1
TOTAL	3	1	6	1	1	3	4	1	

TABLE 292 NAIL DISTRIBUTION (Variation and Length) – 9G40

Length \ Variation	A1	A2	A3	A4	A6	A30	A38	A79	A94	A95	A118	B6	B8		TOTAL
3/4															
1															
1/4															
1/2												1			1
3/4															
2															
1/4															
1/2															
3/4															
3															
1/4															
1/2								1							1
3/4		1													1
4		1	1												2
1/4			2												2
1/2				1											1
3/4										1					1
5															
1/4															
1/2															
3/4															
6															
1/4															
1/2															
3/4															
7															
1/4															
1/2															
3/4															
8															
1/4															
1/2															
3/4															
9															
1/4															
1/2															
3/4															
10															
1/4															
1/2															
3/4															
11															
1/4															
1/2															
3/4															
Indeterminate															
TOTAL	26	2	3	1	46	6	1	1	3	1	1	1	2		

Cookhouse (9G24; Fig. 48: structure 24)

The building first appears on the plan of 1815 and appears to have continued in relatively good repair until at least 1857 although no mention is made of repair or maintenance. It was reported in ruins in 1868 and was sold in 1872.

The high frequency of wrought nails (93.3 per cent; Table 29) is in agreement with construction in period II. The only hinge present is cast (Table 294). The quantity of cut nails (5.9 per cent; Table 29) suggests that little or no construction took place on the building once such nails were available.

TABLE 293 NUT - 9G24

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH AND WIDTH or DIAMETER	THICKNESS	HOLE: DIAMETER	QUANTITY
1	24A1-40	Iron	Comp	1 15/16 sq.	3/4	7/8	1

TABLE 294 HINGE - 9G24

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	MINIMUM WIDTH	THICKNESS	NUMBER PER SIDE AND DIAMETER OF FASTENING HOLES	COUNTERSINKING	HOLE ARRANGEMENT	T PLATE: LENGTH	MEDIAN: WIDTH	JOINT: LENGTH	SOCKET: INSIDE DIAMETER	QUANTITY
1	24D1-95	Iron	Incomp	4	1 7/16 (tml)	NA	3/16	4, 1/4	F&B	offset	NA	NA	NA	NA	1

TABLE 295

PADLOCK - 9G24

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	HOUSING					
				LENGTH	WIDTH	THICKNESS	PLATE: THICKNESS	BOW: MAXIMUM CROSS SECTION	QUANTITY
Ind	24D1-93	Iron	PART Comp	NA	NA	NA	NA	3/8	1

Consisting only of a bow; possible Variation 1, 2, or 3.

TABLE 296

PINTLE - 9G24

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	SHANK			PIN		WING: MAXIMUM WIDTH	NUMBER AND DIAMETER OF FASTENING HOLES	REINFORCING ARM		QUANTITY
				LENGTH	MAXIMUM CROSS SECTION	WIDTH AT SHOULDER	LENGTH	MAXIMUM DIAMETER			LENGTH	MAXIMUM CROSS SECTION	
8	24D1-94	Iron	Incomp	3 9/16	3/8 sq.	NA	Ind	Ind	NA	NA	NA	NA	1

Pin is missing; socket inside diameter 17/32".

TABLE 297

SCREW - 9G24

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY	VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY
Ind	24D1-132	Iron	Frag	Ind	1						

Possible Variation 1 or 3.

TABLE 298

STAPLE - 9G24

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	INSIDE WIDTH	BAR: MAXIMUM CROSS SECTION	PLATE: SHOULDER HEIGHT	PLATE: LENGTH	PLATE: WIDTH	PLATE: THICKNESS	QUANTITY
1	24D1-91	Iron	Incomp	3 5/8	1 5/8	7/16 x 5/16	NA	Ind	Ind	Ind	1
5	24D1-92	Iron	Incomp	1 7/8 (R)	5/8	1/4 sq.	NA	NA	NA	NA	1

TABLE 299 — THUMB LATCH, GUIDE - 9G24

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	THICKNESS	STAPLE: INSIDE WIDTH	STAPLE: INSIDE HEIGHT	HOLE: DIAMETER	COUNTERSINKING	QUANTITY
2	24A1-39	Iron	Incomp	2 5/8 (R)	3/4	1/8	1 9/16	3/16	1/4	F&B	1

TABLE 300 — WASHER - 9G24

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH AND WIDTH OR DIAMETER	THICKNESS	HOLE: DIAMETER OR LENGTH AND WIDTH	FASTENING HOLE: DIAMETER	QUANTITY
1	24D1-131	Iron	Comp	2 5/8	3/16	1 3/8	NA	1

TABLE 301 NAIL DISTRIBUTION (Variation and Length) – 9G24

Length \ Variation	A1	A2	A3	A4	A5	A6	A13	A14	A15	A26	A29	A30	A33	A47	A52	A60	A61	A70	A72
3/4																			
1										1									
1/4		1			1					11									
1/2				1						11	1								
3/4		1			1														
				1															
2				1							1		1						
1/4																			
1/2				2	1														
					1														
3/4				3	1														
3				1	2									1	1				
		1		3															
1/4		1		3			1												
				5															
1/2		1		3	1														
3/4				5															
				7															
				1															
4				4															
				10															
1/4				3	1			1											
1/2			1	4															
			1	4															
3/4				5															
				8	1														
5				5															
				2															
1/4				1	1												1		
				2															
1/2				1															
					1														
3/4								1											
6																			
1/4																			
1/2																	1		
3/4																			
7																			
1/4																1	1		
1/2																	1		
3/4																	4		
																	1		
8																			
1/4																	2		
1/2																		1	
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate																			
TOTAL	68	5	2	85	12	137	1	2	1	23	2	5	1	1	1	1	11	1	4

TABLE 301 (cont.) NAIL DISTRIBUTION (Variation and Length) – 9G24

Length \ Variation	A78	A79	A81	A94	A95	A96	A97	A119	B1	B6	B7	B8	C2		TOTAL
3/4															
1															1
1/4															13
1/2															11
3/4															2
2						1									4
1/4						1					1				2
1/2						2					1				6
3/4						1							1		5
3						1									2
1/4						1				1	1		1		6
1/2															6
3/4															3
4					1										7
1/4					1										7
1/2		2			2	1									1
3/4		2			5	1									4
5					4	2									11
1/4					4	1									6
1/2	1				1	1									7
3/4	1					1									13
6								1					1		14
1/4															14
1/2															7
3/4															3
7															3
1/4															2
1/2															2
3/4															1
8															2
1/4															1
1/2															1
3/4															4
9															1
1/4															2
1/2															1
3/4															
10															
1/4															
1/2															
3/4															
11															
1/4															
1/2															
3/4															
Indeterminate															
TOTAL	2	4	3	4	18	14	8	1	1	1	4	17	3		

Barracks Store (9G25; Fig. 48: structure 25)

The building was apparently constructed in 1827-28 although it does not appear on plans until the 1830s. It survived in good condition, although it probably stood vacant in the 1850s, and was sold in 1872.

This is the only building which can definitely be attributed to period III and yet the artifacts do not indicate any significant change from the earlier periods. The frequency of cut nails (12.7 per cent; Table 29) suggests some repair or alteration once such nails became available. The remaining items (Tables 302-313) are relatively few in number and, thus, not able to provide an extensive reflection of construction of the time. The general lack of door hardware again suggests its removal during the time of vacancy.

TABLE 302 BOLT - 9G25

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	THREAD: DIAMETER		QUANTITY
1	25K2-14	Iron	Comp	2 13/16	5/16	11/32		1
3	25D1-30	Iron	Comp	4 13/16	5/16	7/16		1
8	25D1-29	Iron	Comp	1 15/16	11/32	-		1
10	25A2-69	Iron	Comp	2 1/16	1/4	-		1
12	25A2-70	Iron	Comp	3 7/8	1/2	-		1

TABLE 303 — NUT - 9G25

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH AND WIDTH OR DIAMETER	THICKNESS	HOLE: DIAMETER	QUANTITY
1	25G1-28	Iron	Comp	1 1/4 x 1 1/8	1/2	5/8	1

TABLE 304 — GATE HOOK - 9G25

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	HOOK: LENGTH	EYE: INSIDE DIAMETER	QUANTITY
2	25B1-24	Iron	Comp	5 13/16	3/8 x 1/4	1 1/8	1/2	1

TABLE 305 — HASP - 9G25

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	MAXIMUM CROSS SECTION	PIVOT HOLE: WIDTH	LOCKING HOLE: WIDTH	QUANTITY
4	25E1-41	Iron	Incomp	4 3/8 (R)	3/4 x 1/16	Ind	1/2	1

TABLE 306 HINGE - 9G25

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	MINIMUM WIDTH	THICKNESS	NUMBER PER SIDE AND DIAMETER OF FASTENING HOLES	COUNTERSINKING	HOLE ARRANGEMENT	T PLATE: LENGTH	MEDIAN: WIDTH	JOINT: LENGTH	SOCKET: INSIDE DIAMETER	QUANTITY
1	25D1-6	Iron	Comp	2 1/4	1 7/8	NA	1/8	3, 1/4	Front	Linear	NA	NA	NA	NA	1
15	25A2-75	Iron	Incomp	5 7/8 (R)	1 3/16	NA	1/8	1, 1/4	Abs	Ind	NA	NA	NA	NA	1

TABLE 307 PINTLE - 9G25

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	SHANK			PIN		WING: MAXIMUM WIDTH	NUMBER AND DIAMETER OF FASTENING HOLES	REINFORCING ARM		QUANTITY
				LENGTH	MAXIMUM CROSS SECTION	WIDTH AT SHOULDER	LENGTH	MAXIMUM DIAMETER			LENGTH	MAXIMUM CROSS SECTION	
1	25A2-73	Iron	Comp	5 7/16	5/8 x 1/2	NA	1 1/4	5/8	NA	NA	NA	NA	1
2	25A2-72	Iron	Comp	4 15/16	9/16 x 5/16	NA	1 1/8	7/16	NA	NA	NA	NA	1

Axis of point is horizontal.

TABLE 308

SCREW - 9G25

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY	VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY
Ind	25J1-19	Iron	Frag	Ind	1						

Possible Variation 1 or 3.

TABLE 309

SLIDING BOLT - 9G25

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	BOLT						PLATE				QUANTITY
				LENGTH	MAXIMUM CROSS SECTION	HANDLE				LENGTH	WIDTH	THICKNESS	NUMBER AND DIAMETER OF FASTENING HOLES	
						DIAMETER	HEIGHT							
Ind	25A2-76	Iron	Par	6 (R)	7/16 x 1/4	Ind	Ind			Ind	Ind	Ind	Ind	1

Consisting only of part of a bolt; possible Variation 2.

TABLE 310 STAPLE - 9G25

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	INSIDE WIDTH	BAR: MAXIMUM CROSS SECTION	SHOULDER HEIGHT	PLATE LENGTH	PLATE WIDTH	PLATE THICKNESS	QUANTITY
8	25E2-19	Iron	Incomp	2 3/8	2 7/16	7/16 x 1/8	NA	NA	NA	NA	1
Ind	25A2-71	Iron	Incomp	1 15/16 (R)	1/2	1/4 x 3/16	NA	NA	NA	NA	1
	Possible Variation 4 or 5.										
	25F1-16	Iron	Incomp	1 (R)	Ind	1/2 x 5/32	NA	NA	NA	NA	1
	Possible Variation 8.										
	25J1-21	Iron	Incomp	2 3/8 (R)	Ind	1/2 x 3/16	NA	NA	NA	NA	1

TABLE 311 — THUMB LATCH, CATCH - 9G25

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	HOOK: LENGTH	HOOK: HEIGHT	REINFORCING SHANK: LENGTH	REINFORCING SHANK: DISTANCE FROM HOOK	PLATE: LENGTH	PLATE: WIDTH	NUMBER AND DIAMETER OF FASTENING HOLES	QUANTITY
Ind	25C1-17	Iron	Incomp	4 7/8 (R)	7/16 x 3/8	1 15/16	3/8	NA	NA	NA	NA	NA	1

Possible Variation 1 or 2.

TABLE 312 — THUMB LATCH, GUIDE - 9G25

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	THICKNESS	STAPLE: INSIDE WIDTH	STAPLE: INSIDE HEIGHT	HOLE: DIAMETER	COUNTERSINKING	QUANTITY
1	25F1-15	Iron	Incomp	2 3/4 (R)	13/16	1/16	1 1/2	1/4	3/16	Abs	1

TABLE 313 — WASHER - 9G25

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH AND WIDTH OR DIAMETER	THICKNESS	HOLE: LENGTH AND WIDTH OR DIAMETER	FASTENING HOLE: DIAMETER	QUANTITY
1	25G1-27	Iron	Comp	1	1/16	7/16	NA	1

TABLE 314 NAIL DISTRIBUTION (Variation and Length) – 9G25

Length \ Variation	A1	A2	A3	A4	A5	A6	A11	A15	A26	A28	A29	A33	A35	A43	A46	A47	A52	A54	A60
3/4									1										
1																			
1/4				1					1	1									
1/2					1						1						2		
3/4				1 1					1						1		1 1 1		
2					1														
1/4				1 1	1					1 1									
1/2				3															
3/4				2 2 2 6			1					2			1 1				
3				5 8 4 11	1 1 2 1 6											1 2 1			
1/4				11 9 7 5						1 1						1			
1/2												1							
3/4		1	1	4 3	1														1
4				5 5	1 1 1 1 1														
1/4			1 2	8 4															
1/2				6	1														
3/4			1 1	5 3	1														
5				1															
1/4				1 1 1															
1/2				1	1														
3/4																			
6																			
1/4																			
1/2																			
3/4																			
7																			
1/4			1																
1/2																			
3/4																			
8				1															
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate																			
TOTAL	129	1	7	126	23	161	1	4	3	5	1	3	1	2	3	5	5	1	1

TABLE 314 (cont.) NAIL DISTRIBUTION (Variation and Length) – 9G25

Length \ Variation	A61	A62	A63	A69	A70	A71	A72	A73	A79	A80	A81	A84	A90	A93	A94	A95	A96	A100	A101
3/4																			
1																			
1/4																			
1/2																			
3/4																			
2																			
1/4																			
1/2																			
3/4																			
3		1												1					
1/4																			
1/2												1					1		
3/4																			
4																			1
1/4																			
1/2																	1		
3/4					1				1	1						1			
5					1	1			2	2									
1/4				2	1			1	1										
1/2				1															
3/4					1														
6					1														
1/4									1										
1/2					1														
3/4																			
7																			
1/4																			
1/2	1																		
3/4		1			1														
8					1														
1/4				1															
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
indeterminate									1										
TOTAL	1	2	3	4	8	1	6	1	6	3	15	1	1	1	6	1	2	2	1

TABLE 314 (cont.) NAIL DISTRIBUTION (Variation and Length) – 9625

Length \ Variation	A118	B1	B6	B7	B8		TOTAL
3/4							1
1							
1/4							1
1/2			2				4
3/4			1				3
2							2
1/4			1				3
1/2							1
3/4							2
3			1				1
1/4				1			4
1/2			2	1			2
3/4			3	1			12
4			1	1			9
1/4			1				16
1/2			1				10
3/4			1				21
5			1				13
1/4							12
1/2							11
3/4							6
6							6
1/4			1				5
1/2			1				7
3/4			1				8
7							12
1/4							4
1/2							8
3/4							11
8							9
1/4			1				2
1/2							2
3/4							3
9							2
1/4							2
1/2							1
3/4							1
10							
1/4							1
1/2							1
3/4							
11							
1/4							1
1/2							1
3/4							2
Indeterminate							1
TOTAL	1	5	18	4	39		

Retaining Wall near North Blockhouse (9G26; Fig. 48: structure 26)

No information on construction is available and since no building is involved it is likely that most of the hardware is debris from the North Blockhouse. This possibility is reinforced by the high frequency of wrought nails (93.7 per cent; Table 29), the presence of a door lock tumbler variation 1 (Table 319) and an absence of cast hinges (Table 321), although only one hinge is present; all of which could be associated with construction during period I.

TABLE 315 — BOLT - 9G26

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	THREAD: DIAMETER		QUANTITY
3	26A2-69	Iron	Comp	3 7/16	7/16	7/16		1
	NUT: Variation 1; 1" sq. x 3/8".							
4	26A4-241	Iron	Comp	4 1/2	15/32	Ind		1
	NUT: Variation 1; 1" sq. x 3/8".							
19	26A2-145	Iron	Frag	-	15/32 x 9/32	5/16		1
	NUT: Variation 1; 7/8" x 3/4" x 5/16".							
Ind	26E1-16	Iron	Frag	-	7/8	-		1

TABLE 316 — NUT - 9G26

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH AND WIDTH or DIAMETER	THICKNESS	HOLE: DIAMETER		QUANTITY
1	26A2-149	Iron	Comp	1 7/16 x 1 3/8	1/2	5/8		1
3	26C1-41	Iron	Comp	7/8 x 3/4	11/32	3/8		1

TABLE 317 DOOR LOCK - 9G26

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	HOUSING: LENGTH	HOUSING: MAXIMUM WIDTH	HOUSING: MINIMUM WIDTH	HOUSING: PLATE: THICKNESS	QUANTITY
2	26A3-51	Iron	Incomp	5 3/4	Ind	2 15/16	1/8	1

Housing contains only the lock bolt and tumbler.

TABLE 318 DOOR LOCK, LOCK BOLT - 9G26

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY
2	24A2-147	Iron	Incomp	8 1/8	1

TABLE 319 DOOR LOCK, TUMBLER - 9G26

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	LOOP: LENGTH AND WIDTH	QUANTITY
1	26A3-54	Iron	Comp	3 5/8	1 5/8 x 1 5/16	1

TABLE 320 | EYE - 9G26

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	EYE: INSIDE DIAMETER	THREAD: DIAMETER	WASHER: LENGTH AND WIDTH	QUANTITY
5	26A3-53	Iron	Incomp	11 5/8 (R)	13/16 x 5/16	Ind	NA	NA	1
8	26E1-15	Iron	Incomp	5 3/16 (R)	5/16	7/16	NA	NA	1

TABLE 321 | HINGE - 9G26

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	MINIMUM WIDTH	THICKNESS	NUMBER PER SIDE AND DIAMETER OF FASTENING HOLES	COUNTERSINKING	HOLE ARRANGEMENT	T PLATE: LENGTH	MEDIAN: WIDTH	JOINT: LENGTH	SOCKET: INSIDE DIAMETER	QUANTITY
Ind	26C1-39	Iron	Par	6 7/8 (R)	7/8 (R)	11/16 (R)	1/8	2, 1/4	Abs	Lineal	NA	NA	NA	NA	1

Consisting only of part of a strap, with neither end present.

TABLE 322

LYNCH PIN - 9G26

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	MAXIMUM WIDTH	MAXIMUM THICKNESS	QUANTITY
1	26A4-247	Iron	Comp	3 1/2	13/16	3/16	1

TABLE 323

RIVET - 9G26

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	MAXIMUM CROSS SECTION	HEAD: DIAMETER	WASHER: LENGTH AND WIDTH	QUANTITY
2	26A4-238	Iron	Comp	2 1/2	-	-	-	1
	26A4-239	Iron	Comp	2 3/4	1/4 sq.	-	-	1
	26A4-240	Iron	Comp	1 3/4	1/4 sq.	-	-	1
	26C2-19	Iron	Incomp	1 15/16	1¾ sq.	-	-	1

TABLE 324 STAPLE - 9G26

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	INSIDE WIDTH	BAR: MAXIMUM CROSS SECTION	SHOULDER HEIGHT	PLATE LENGTH	PLATE WIDTH	PLATE THICKNESS	QUANTITY
5	26A4-242	Iron	Incomp	2 3/8	7/16	5/16 x 1/4	NA	NA	NA	NA	1
	26A4-243	Iron	Incomp	3 3/4	1	5/16 sq.	NA	NA	NA	NA	1
Ind	26A4-244	Iron	Incomp	2 1/2 (R)	1 7/8	9/16 x 1/4	NA	NA	NA	NA	1

TABLE 325 — THUMB LATCH, BAR - 9G26

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	MAXIMUM WIDTH	MINIMUM WIDTH	THICKNESS	PIVOT END: WIDTH	PIVOT END: THICKNESS	PIVOT END: HOLE: DIAMETER	HANDLE: LENGTH	HANDLE: DIAMETER	QUANTITY
1	26A4-245	Iron	Comp	5 3/4	1 1/16	3/8	1/4	1 5/32	1/4	5/16	NA	NA	1
	26C1-40	Iron	Incomp	4 7/8 (R)	5/8 (R)	1/2	3/16	1 3/8	3/32	1/4	NA	NA	1

TABLE 326 — WASHER - 9G26

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH AND WIDTH OR DIAMETER	THICKNESS	HOLE: DIAMETER OR LENGTH AND WIDTH	FASTENING HOLE: DIAMETER	QUANTITY
1	26A1-47	Iron	Comp	4 1/8	1/8	2 9/16	NA	1

TABLE 327 NAIL DISTRIBUTION (Variation and Length) – 9G26

Length \ Variation	A1	A2	A3	A4	A5	A6	A11	A15	A16	A20	A24	A25	A26	A29	A30	A54	A62	A63	A68
3/4																			
1																			
1/4		1											1						
1/2		1											1				1		
3/4		1											1						
2		4		1															
1/4		7												1					
1/2		6		1	1														
3/4		5			1				1										
3		1																	
1/4		1																	
1/2		3		1	2		1												
3/4		5		1															
4		3																	
1/4		6																	
1/2		6																	
3/4		6		1															
4		5		1															
1/4		6			1														
1/2		3	2		1														
3/4		3		1	1														
5		2																	
1/4		4	5								1								
1/2		3	2																
3/4		2																	
5		1	2																
1/4			1																
1/2		1																	
3/4		1			1														
6		1			1														
1/4																			
1/2																			
3/4																			
7																			
1/4																			
1/2				1															
3/4																			
8																			1
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate																			
TOTAL	202	103	12	8	9	226	1	3	1	1	1	3	3	1	3	1	1	4	1

TABLE 327(cont.) NAIL DISTRIBUTION (Variation and Length) — 9G26

Length \ Variation	A73	A74	A78	A81	A92	A94	A95	A97	A104	A106	A114	A115	A116	A117	A118	A121	B1	B6	B8
3/4																			
1																			
1/4																			
1/2																			
3/4											1								
2																			
1/4					1														
1/2					1														
3/4					1													1	
3											1							3	
1/4																		7	
1/2																		3	
3/4																		1	
4																		1	
1/4							2				1							2	
1/2			1				6				1								
3/4			1				2												
5							4						1						
1/4			1				3		1										
1/2							1												
3/4			1																
6																			
1/4		1																	
1/2																			
3/4																			
7																			
1/4																			
1/2																			
3/4																			
8																			
1/4																			
1/2																			
3/4																			
9													1						
1/4																			
1/2																			
3/4																			
10										1									
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
indeterminate											8	3	9	6					
TOTAL	10	1	4	5	3	17	19	12	1	1	12	3	11	6	77	5	5	18	14

TABLE 327 (cont.) NAIL DISTRIBUTION (Variation and Length) — 9G28

Length \ Variation	C2	D5	D6	D9	D15	TOTAL
3/4						
1						2
1/4				1		2
1/2						1
3/4						1
2		1			1	2
1/4						6
1/2			1			8
3/4						9
3						6
1/4						3
1/2						2
3/4						5
4						4
1/4	2					2
1/2						6
3/4						14
5						10
1/4						6
1/2						7
3/4						7
6						8
1/4						6
1/2						4
3/4						11
7						4
1/4						10
1/2						12
3/4						10
8						6
1/4						5
1/2						2
3/4						1
9						1
1/4						3
1/2						2
3/4						
10						1
1/4						
1/2						
3/4						1
11						
1/4						
1/2						
3/4						
indeterminate						26
TOTAL	2	1	1	1	1	

Miscellaneous Test Areas (9G27, 9G29, 9G30, 9G33, 9G34, 9G37, 9G41 and 9G52)

Since all of these operations do not involve a building and probably also do not represent construction, the small number of items they provide (Tables 328-341) can be considered as refuse from some unidentified areas of construction in their immediate vicinity. Only one operation, 9G37, has a large quantity of nails.

TABLE 328 NAIL DISTRIBUTION (Variation and Length) – 9G27

Length \ Variation	A1	A3	A4	A5	A6	A61	A93	A94	A95		TOTAL
3/4											
1											
1/4											
1/2											
3/4											
2											
1/4											
1/2											
3/4											
3											
1/4											
1/2						1					1
3/4				1							1
4			1	1							1
1/4							1				1
1/2		1							1		1
3/4									1		1
5		1									1
1/4											
1/2											
3/4											
6											
1/4											
1/2											
3/4											
7											
1/4											
1/2											
3/4											
8											
1/4											
1/2											
3/4											
9											
1/4											
1/2											
3/4											
10											
1/4											
1/2											
3/4											
11											
1/4											
1/2											
3/4											
Indeterminate											
TOTAL	5	2	1	2	4	1	1	1	2		

TABLE 329

STAPLE - 9G29

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	INSIDE WIDTH	BAR: MAXIMUM CROSS SECTION	SHOULDER HEIGHT	PLATE LENGTH	PLATE WIDTH	PLATE THICKNESS	QUANTITY
Ind	29A1-11	Iron	Incomp	1 5/16 (R)	1/2	1/4 sq.	NA	NA	NA	NA	1

TABLE 330

THUMB LATCH, CATCH - 9G29

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	HOOK LENGTH	HOOK HEIGHT	REINFORCING SHANK LENGTH	REINFORCING SHANK DISTANCE FROM HOOK	PLATE LENGTH	PLATE WIDTH	NUMBER AND DIAMETER OF FASTENING HOLES	QUANTITY
Ind	29A1-10	Iron	Incomp	3 1/2 (R)	7/16 x 5/32	1 1/4	5/16	NA	NA	NA	NA	NA	1

TABLE 331 NAIL DISTRIBUTION (Variation and Length) – 9G29

Length \ Variation	A1	A4	A6	A72	A96		TYTAL
3/4							
1							
1/4							
1/2							
3/4							
2							
1/4							
1/2							
3/4							
3					1		1
1/4							
1/2							
3/4		1					1
		1					1
4		1					1
1/4							
1/2							
3/4							
5							
1/4							
1/2							
3/4							
6							
1/4							
1/2							
3/4							
7							
1/4							
1/2							
3/4							
8							
1/4							
1/2							
3/4							
9							
1/4							
1/2							
3/4							
10							
1/4							
1/2							
3/4							
11							
1/4							
1/2							
3/4							
Indeterminate							
TOTAL	4	3	4	1	1		

TABLE 332 NAIL DISTRIBUTION (Variation and Length) – 9G30

Length \ Variation	A1	A2	A6		TOTAL
3/4					
1					
1/4					
1/2					
3/4					
2					
1/4					
1/2					
3/4					
3					
1/4					
1/2					
3/4					
4					
1/4					
1/2					
3/4					
5					
1/4		1			1
1/2					
3/4					
6					
1/4					
1/2					
3/4					
7					
1/4					
1/2					
3/4					
8					
1/4					
1/2					
3/4					
9					
1/4					
1/2					
3/4					
10					
1/4					
1/2					
3/4					
11					
1/4					
1/2					
3/4					
indeterminate					
TOTAL	1	1	2		

TABLE 333 NAIL DISTRIBUTION (Variation and Length) – 9G33

Length \ Variation	A1	A4	A70	D12		TOTAL
3/4						
1						
1/4						
1/2						
3/4						
2						
1/4						
1/2				1		1
3/4						
3						
1/4						
1/2						
3/4		1				1
4						
1/4						
1/2		1				1
3/4						
5						
1/4						
1/2						
3/4						
6						
1/4						
1/2						
3/4						
7			1			1
1/4						
1/2						
3/4						
8						
1/4						
1/2						
3/4						
9						
1/4						
1/2						
3/4						
10						
1/4						
1/2						
3/4						
11						
1/4						
1/2						
3/4						
Indeterminate						
TOTAL	1	2	1	1		

TABLE 334 NAIL DISTRIBUTION (Variation and Length) – 9G34

Length \ Variation	A4	A6	TOTAL
3/4			
1			
1/4			
1/2	1		1
3/4			
2			
1/4	1		1
1/2			
3/4	1		1
3	1		1
1/4	1		1
1/2			
3/4			
4			
1/4			
1/2			
3/4			
5			
1/4			
1/2			
3/4			
6			
1/4			
1/2			
3/4			
7			
1/4			
1/2			
3/4			
8			
1/4			
1/2			
3/4			
9			
1/4			
1/2			
3/4			
10			
1/4			
1/2			
3/4			
11			
1/4			
1/2			
3/4			
indeterminate			
TOTAL	5	3	

TABLE 335 NUT - 9G37

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH AND WIDTH OF DIAMETER	THICKNESS	HOLE: DIAMETER	QUANTITY
1	37B1-60	Iron	Comp	1 5/16 x 1 1/4	5/16	7/16	1

TABLE 336 SCREW - 9G37

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY
1	37B1-59	Iron	Comp	2 15/16	1

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	HOOK: LENGTH	HOOK: HEIGHT	REINFORCING SHANK: LENGTH	REINFORCING SHANK: DISTANCE FROM HOOK	PLATE: LENGTH	PLATE: WIDTH	NUMBER AND DIAMETER OF FASTENING HOLES	QUANTITY
2	37B1-61	Iron	Comp	3 1/4	5/16 x 5/32	9/16	5/16	NA	NA	NA	NA	NA	1

TABLE 337 THUMB LATCH, CATCH - 9G37

TABLE 338 NAIL DISTRIBUTION (Variation and Length) — 9G37

Length \ Variation	A1	A3	A4	A5	A6	A26	A28	A30	A46	A72	A74	A79	A81	A92	A94	A111			
3/4																			
1			1	1		1													
1/4			2			3													
1/2			6			1	2		1							1			
3/4			3			1													
			1																
			3																
2			2																
1/4			1																
1/2			1																
3/4			1																
3			2	2															
1/4			5											1					
1/2			1																
3/4			7																
			3																
			3																
			2																
4			1																
1/4												1							
1/2		1	1																
3/4											1								
		2																	
5																			
1/4																			
1/2																			
3/4																			
6																			
1/4																			
1/2																			
3/4											1								
7																			
1/4																			
1/2																			
3/4																			
8																			
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
indeterminate																			
TOTAL	47	3	47	3	52	6	2	2	1	1	2	1	3	1	1	1			

TABLE 338(cont.) NAIL DISTRIBUTION (Variation and Length) – 9G37

Length \ Variation	B1	B6	B8	C2	D13		TOTAL
3/4							
1							1
1/4							2
1/2							5
3/4							7
2		1					8
1/4				1			1
1/2							3
3/4							1
3							2
1/4		2		1			1
1/2							1
3/4		1					1
4							4
1/4							5
1/2							5
3/4							7
5							4
1/4							3
1/2							2
3/4							1
6							1
1/4							2
1/2							1
3/4							2
7							1
1/4							1
1/2							1
3/4							1
8							1
1/4							1
1/2							1
3/4							1
9							1
1/4							1
1/2							1
3/4							1
10							1
1/4							1
1/2							1
3/4							1
11							1
1/4							1
1/2							1
3/4							1
Indeterminate							
TOTAL	3	4	11	2	1		

TABLE 339

SLIDING BOLT - 9G41

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	BOLT					PLATE				
				LENGTH	MAXIMUM CROSS SECTION	HANDLE			LENGTH	WIDTH	THICKNESS	NUMBER AND DIAMETER OF FASTENING HOLES	QUANTITY
						DIAMETER	HEIGHT						
5	41B1-10	Iron	Comp	4 1/2	15/32 x 7/32	NA	7/8		4 1/2	1 1/4	1/16	4, 1/4	1

TABLE 340 NAIL DISTRIBUTION (Variation and Length) – 9G41

Length \ Variation	A1	A6	A63	A79	A81		TOTAL
3/4							
1							
1/4							
1/2							
3/4							
2							
1/4							
1/2							
3/4							
3							
1/4							
1/2							
3/4							
4							
1/4							
1/2							
3/4							
5				1			1
1/4							
1/2							
3/4							
6							
1/4							
1/2							
3/4							
7							
1/4							
1/2							
3/4							
8							
1/4							
1/2							
3/4							
9							
1/4							
1/2							
3/4							
10							
1/4							
1/2							
3/4							
11							
1/4							
1/2							
3/4							
Indeterminate							
TOTAL	7	10	2	1	1		

TABLE 341 NAIL DISTRIBUTION (Variation and Length) - 9G52

Length \ Variation	A4	TOTAL
3/4		
1		
1/4		
1/2		
3/4		
2		
1/4		
1/2		
3/4		
3	1	1
1/4		
1/2		
3/4		
4		
1/4		
1/2		
3/4		
5		
1/4		
1/2		
3/4		
6		
1/4		
1/2		
3/4		
7		
1/4		
1/2		
3/4		
8		
1/4		
1/2		
3/4		
9		
1/4		
1/2		
3/4		
10		
1/4		
1/2		
3/4		
11		
1/4		
1/2		
3/4		
indeterminate		
TOTAL	1	

Maypole (9G28; Fig. 48: structure 31)

The absence of a building in the area is reflected in the small number of artifacts (Tables 342, 343), one door lock part and 9 nails, which do not provide a basis for any further discussion.

TABLE 342 — DOOR LOCK - SG28

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	HOUSING: LENGTH	HOUSING: MAXIMUM WIDTH	HOUSING: MINIMUM WIDTH	HOUSING: PLATE: THICKNESS		QUANTITY
Ind	28A1-13	Iron	PART Comp	NA	NA	NA	NA		1

Consisting only of a tumbler; possible Variation 1 or 2 .

TABLE 343 NAIL DISTRIBUTION (Variation and Length) — 9G28

Length \ Variation	A4	A6	A28	A81	B1	B8	TOTAL
3/4							
1							
1/4							
1/2							
3/4							
2							
1/4							
1/2	1						1
3/4							
3							
1/4							
1/2	1		1				1 1
3/4							
4							
1/4							
1/2							
3/4							
5							
1/4							
1/2							
3/4							
6	1						1
1/4							
1/2							
3/4							
7							
1/4							
1/2							
3/4							
8							
1/4							
1/2							
3/4							
9							
1/4							
1/2							
3/4							
10							
1/4							
1/2							
3/4							
11							
1/4							
1/2							
3/4							
indeterminate							
TOTAL	3	2	1	1	1	1	

Palisade (9G31; Fig. 48: north of structure 3)

Since no building is involved in this area the few items of hardware (Tables 344-348) are likely from construction in the immediate vicinity. The frequency of wrought nails (97.1 per cent; Table 29) indicates construction activity either some time during period I or period II.

TABLE 344

NUT - 9G31

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH AND WIDTH OR DIAMETER	THICKNESS	HOLE: DIAMETER	QUANTITY
1	31B1-70	Iron	Comp	2 11/16 x 2 5/8	9/16	1	1

TABLE 345

DOOR LOCK - 9G31

Consisting only of a cover plate.

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	HOUSING: LENGTH	HOUSING: MAXIMUM WIDTH	HOUSING: MINIMUM WIDTH	PLATE: THICKNESS	QUANTITY
2	31B1-69	Iron	PART Comp	NA	NA	NA	1/16	1

TABLE 346 — PINTLE - 9G31

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	SHANK				PIN		REINFORCING ARM				NUMBER AND DIAMETER OF FASTENING HOLES	WING: MAXIMUM WIDTH	QUANTITY
				LENGTH	MAXIMUM CROSS SECTION	WIDTH AT SHOULDER	LENGTH	MAXIMUM DIAMETER	LENGTH	MAXIMUM CROSS SECTION		LENGTH				
6	31C1-46	Iron	Comp	5 3/16	1/2 x 7/16	NA	1 11/16	7/16	NA	NA		NA		NA	NA	1

TABLE 347 — THUMB LATCH, BAR - 9G31

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	MAXIMUM WIDTH	MINIMUM WIDTH	THICKNESS	PIVOT END			HANDLE		QUANTITY
								WIDTH	THICKNESS	HOLE: DIAMETER	LENGTH	DIAMETER	
3	31B1-68	Iron	Incompl	5 1/4 (R)	5/8 (R)	5/16	3/16	7/16	1/8	1/4	Ind	Ind	1

TABLE 348 NAIL DISTRIBUTION (Variation and Length) – 9G31

Length \ Variation	A1	A2	A3	A4	A5	A6	A15	A26	A28	A47	A69	A70	A115	B1	B8		TOTAL		
3/4																			
1																			
1/4								1	1								2		
1/2		1		1					1								2		
3/4				2													1		
2		1															2		
1/4		1		2				1									1		
1/2				3													4		
3/4		1		1					1	2							3		
3				1													1		
1/4		1		1	2												2		
1/2			1	3													4		
3/4				3													5		
4				2													3		
1/4				1													1		
1/2				1													5		
3/4				5															
4				1					1								1		
1/4				3													1		
1/2				2													3		
3/4				1								1					2		
5				2													2		
1/4			1								1						2		
1/2																			
3/4																			
6																			
1/4																			
1/2																			
3/4																			
7											1						1		
1/4												1					1		
1/2												1							
3/4												1					1		
8																	1		
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
indeterminate													1				1		
TOTAL	24	5	2	37	2	40	1	2	4	2	2	4	1	2	3				

Road South of Ramp and in Vicinity of Stone Barracks (9G38; Fig. 48: unmarked)

This area represents neither a building nor construction and the few items of hardware from it (Tables 349-351) are presumably from construction in the immediate vicinity, possibly the Stone Barracks. The frequency of cut nails (17.4 per cent; Table 29) suggests construction activity no earlier than period III and may reflect repairs for the Stone Barracks.

TABLE 349

BOLT - 9G38

VARIATION	20
PROVENIENCE	38A1-92
MATERIAL	Iron
COMPLETENESS	Comp
LENGTH	6 5/16
SHANK: MAXIMUM CROSS SECTION	3/8
THREAD: DIAMETER	3/8
QUANTITY	1

TABLE 350

SCREW - 9G38

VARIATION	1
PROVENIENCE	38A1-93
MATERIAL	Iron
COMPLETENESS	Comp
LENGTH	1 5/8
QUANTITY	1
VARIATION	
PROVENIENCE	
MATERIAL	
COMPLETENESS	
LENGTH	
QUANTITY	

TABLE 351 NAIL DISTRIBUTION (Variation and Length) — 9G38

Length \ Variation	A1	A2	A3	A4	A5	A6	A9	A12	A13	A26	A35	A47	A61	A70	A72	A78	A79	A81	A90
3/4																			
1																			
1/4										1									
1/2										1									
3/4												1							
2																			
1/4																			
1/2		1		1 1					1										
3/4				1 1															
3																			
1/4				2					1										
1/2				2 1 1				1	1										
3/4				2	1		1										1		
4		1		2 2 3															
1/4				1															
1/2				1													1		
3/4		1	1										1				1		
5			1	1												1			
1/4				1										2					
1/2																			
3/4														1					
6																			
1/4																			
1/2																			
3/4																			
7																			
1/4																			
1/2																			
3/4				1															
8																			
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
indeterminate																			
TOTAL	6	3	2	24	1	18	1	1	3	2	1	1	1	3	3	1	3	1	3

TABLE 351 (cont.) NAIL DISTRIBUTION (Variation and Length) — 9G38

Length \ Variation	A93	A94	A96	B1	B6	B8	C2		TOTAL
3/4									
1									
1/4									1
1/2									1
3/4					1				1
2									
1/4									2
1/2									2
3/4					1				2
3					1				2
1/4					2				5
1/2					1				4
3/4	1				1				1
4									4
1/4							1		2
1/2					1				2
3/4									1
5			1						2
1/4									2
1/2									3
3/4									1
6									1
1/4									2
1/2									
3/4									
7									
1/4									
1/2									
3/4									1
8									
1/4									
1/2									
3/4									
9									
1/4									
1/2									
3/4									
10									
1/4									
1/2									
3/4									
11									
1/4									
1/2									
3/4									
Indeterminate									
TOTAL	1	1	1	3	8	8	1		

Road East and West of Canal (9G39; Fig. 48: unmarked) This area does not represent any construction and the hardware it provided (Tables 352-362) must be associated with construction in its immediate vicinity. Although there are only a small number of other items, the large quantity of nails is of interest in an area where no building has stood. The high frequency of wrought nails (91.9 per cent; Table 29) reflects construction activity some time during period I or period II.

TABLE 352 — BOLT - 9G39

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	THREAD: DIAMETER	QUANTITY
8	39B1-372	Iron	Comp	2 3/4	11/16	11/16	1
20	39A1-59	Iron	Comp	3 5/16	5/16	5/16	1
Ind	39B1-377	Iron	Frag	-	5/16	11/32	1

Possible Variation 20.

TABLE 353 — NUT - 9G39

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH AND WIDTH OF DIAMETER	THICKNESS	HOLE: DIAMETER	QUANTITY
1	39B1-378	Iron	Comp.	3/4 sq.	1/4	1/4	1
	39B1-379	Iron	Comp	1 1/4 x 1 1/8	3/8	7/16	1
	39B1-380	Iron	Comp	1 3/8 x 1 5/16	5/16	7/16	1

TABLE 354 — DOOR LOCK - 9G39

Consisting of an incomplete housing with a complete mechanism.

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	HOUSING				QUANTITY
				LENGTH	MAXIMUM WIDTH	MINIMUM WIDTH	PLATE: THICKNESS	
3	39B1-387	Iron	Incomp	4	2 15/16	NA	1/16	1

TABLE 355 — EYE - 9G39

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	SHANK: MAXIMUM CROSS SECTION	LENGTH	EYE: INSIDE DIAMETER	THREAD: DIAMETER	WASHER: LENGTH AND WIDTH	QUANTITY
9	39B1-	Iron	Incomp	7/16 x 7/32	4 1/4 (R)	Ind	NA	NA	1

TABLE 356 — HINGE - 9G39

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	MINIMUM WIDTH	THICKNESS	NUMBER PER SIDE AND DIAMETER OF FASTENING HOLES	COUNTERSINKING	HOLE ARRANGEMENT	T PLATE: LENGTH	MEDIAN: WIDTH	JOINT: LENGTH	SOCKET: INSIDE DIAMETER	QUANTITY
1	39B1-389	Iron	Incomp	3	1 1/8 (tml)	NA	5/32	3, 5/16	Front	linear	NA	NA	NA	NA	1

TABLE 357

KEY - 9G39

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	BOW		STEM		PIN		BIT			COLLAR: DIAMETER	QUANTITY
					LENGTH	WIDTH	LENGTH	DIAMETER	LENGTH	DIAMETER	LENGTH	WIDTH	THICKNESS		
3	39Bl-381	Iron	Comp	-	7/16	15/16	-	3/16	NA	NA	3/8	13/32	3/32	NA	1

TABLE 358

PINTLE - 9G39

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	SHANK			PIN		REINFORCING ARM				QUANTITY
				LENGTH	MAXIMUM CROSS SECTION	WIDTH AT SHOULDER	LENGTH	MAXIMUM DIAMETER	LENGTH	MAXIMUM CROSS SECTION	WING: MAXIMUM WIDTH	NUMBER AND DIAMETER OF FASTENING HOLES	
4	39Bl-386	Iron	Comp	4 7/16	1/2 x 7/16	NA	1 3/4	11/16	NA	NA	NA	NA	1

Axis of point is vertical.

TABLE 359 SCREW - 9039

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY	VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY
Ind	39B1-373	Iron	Frag	Ind	1						
	Possible Variation 1 or 3.										
	39B1-374	Iron	Frag	Ind	1						
	Possible Variation 1 or 3.										
	39B1-375	Iron	Frag	Ind	1						
	Possible Variation 1 or 3.										
	39B1-376	Iron	Frag	Ind	1						

TABLE 360 STAPLE - 9G39

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	INSIDE WIDTH	BAR: MAXIMUM CROSS SECTION	SHOULDER HEIGHT	PLATE LENGTH	PLATE WIDTH	PLATE THICKNESS	QUANTITY
5	39B1-382	Iron	Comp	2 1/16	1/2	3/16 sq.	NA	NA	NA	NA	1
	39B1-384	Iron	Incomp	2 9/16	21/32	15/32 x 7/16	NA	NA	NA	NA	1
7	39B1-383	Iron	Incomp	3 1/4	1 1/4	1/2 x 1/4	Ind	NA	NA	NA	1

TABLE 361 WASHER - 9G39

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH AND WIDTH or DIAMETER	THICKNESS	HOLE: DIAMETER or LENGTH AND WIDTH	FASTENING HOLE: DIAMETER		QUANTITY
4	39A1-58	Iron	Comp	1 3/4	1/16	7/8	NA		1

TABLE 362 NAIL DISTRIBUTION (Variation and Length) – 9G39

Length \ Variation	A1	A2	A3	A4	A5	A6	A11	A12	A13	A14	A15	A26	A28	A29	A30	A33	A45	A47	A63
3/4																			
1													1						
1/4		2		1								3	3				1		
1/2		3		4			1					10							
3/4		3		3								2							
		2		3								2	2	1					
		2		1								1							
2		4		4			1					2						1	
1/4		1		3						1									
1/2		1		2												1			
3/4		3		6															
		2		7						1									
		5		6									1					1	
3		2		9	2								2			2		1	
1/4		8		4									1						
1/2		2		20					2				1						
3/4		2		21															
		1		14					1										
		2		10															
		2		10															
4		2		9				1											
1/4		1		11					1										
1/2		1	1	13															
3/4		1	1	11	5														
			1	9				1											
			2	3															
5		1	1	8															
1/4			1	11															
1/2				4															
3/4				7															
				8															
				1															
6																			
1/4																			
1/2				1															
3/4				2															
				1															
7																			
1/4																			
1/2																			
3/4																			
8				1															
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate																			
TOTAL	143	56	7	234	7	395	2	2	4	2	6	21	11	1	15	3	1	3	1

TABLE 362(cont.) NAIL DISTRIBUTION (Variation and Length) -9639

Length \ Variation	A69	A70	A72	A78	A79	A81	A93	A94	A95	A96	A100	A101	A108	B1	B6	B7	B8	C2	C4
3/4																			
1																1			
1/4																			
1/2															1				
3/4										2									
2										3								1	
1/4							1			1					1				
1/2							1			2					1				
3/4										2		1			1				
3										1					6				
1/4															1				
1/2		1													1				
3/4					1					1								1	
4					1				1	1									
1/4					2					1					1			2	
1/2				3	4					2								1	
3/4		1		1	3					4					1				
5		1		1	1					5									
1/4		5			1					3									
1/2		2								2					1				
3/4	1	1								1									
6																		1	
1/4				1															
1/2																			
3/4	1																		
7		1																	
1/4																			
1/2																			
3/4																			
8																			
1/4																			
1/2																			
3/4													1						
9																			
1/4																			
1/2				1															
3/4	1																		
10													1						
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate																			
TOTAL	3	12	7	8	17	12	2	19	1	32	1	1	2	3	20	1	48	7	1

TABLE 362(cont.) NAIL DISTRIBUTION (Variation and Length) – 9639

Length \ Variation	DA	TOTAL
3/4		
1		2
1/4		9
1/2		14
3/4		10
2		11
1/4		6
1/2		7
3/4		10
3		9
1/4		6
1/2		10
3/4		14
4		7
1/4		13
1/2		17
3/4		17
5		32
1/4		25
1/2		17
3/4		15
6		13
1/4		15
1/2		12
3/4		20
7		17
1/4		18
1/2		11
3/4		25
8		19
1/4		14
1/2		14
3/4		15
9		3
1/4		6
1/2		2
3/4		2
10		2
1/4		2
1/2		1
3/4		1
11		1
1/4		1
1/2		1
3/4		1
Indeterminate		
TOTAL	1	

Embrasure (9G43; Fig. 48: west of structure 15)

A total of two items, both nails (Table 363), is not sufficient basis for any further discussion. No building is involved in the area.

TABLE 363 NAIL DISTRIBUTION (Variation and Length) -9G43

Length \ Variation	A6	A94	TOTAL
3/4			
1			
1/4			
1/2			
3/4			
2			
1/4			
1/2			
3/4			
3			
1/4			
1/2			
3/4			
4			
1/4			
1/2			
3/4			
5			
1/4			
1/2			
3/4			
6			
1/4			
1/2			
3/4			
7			
1/4			
1/2			
3/4			
8			
1/4			
1/2			
3/4			
9			
1/4			
1/2			
3/4			
10			
1/4			
1/2			
3/4			
11			
1/4			
1/2			
3/4			
Indeterminate			
TOTAL	1	1	

General Provenience (9G51)

This provenience was used for all artifacts which had lost their original provenience at some time during the multiple handling of the collection. There is little to be gained of a structural nature from any further discussion of them.

TABLE 364 | BOLT - 9G51

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	SHANK: MAXIMUM CROSS SECTION	THREAD: DIAMETER		QUANTITY
3	51A1-151	Iron	Comp	7 5/8	1/2	9/16		1
	51A2-157	Iron	Comp	3 5/16	1/2	1/2		1
8	51A2-156	Iron	Comp	2 15/16	5/16	11/32		1
	51A2-158	Iron	Comp	3 11/16	11/16	11/16		1
21	51A2-155	Iron	Comp	2 3/8	15/32	1/2		1
23	51A2-164	Iron	Comp	13	19/32	1/2		1
	Identical objects have been recovered from the water wheel in 9G1.							
Ind	51A2-161	Iron	Frag	Ind	Ind	Ind		1
	Consisting only of a head constructed of a bar wrapped around the end of another and welded into place.							

TABLE 365 — NUT - 9G51

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH AND WIDTH or DIAMETER	THICKNESS	HOLE: DIAMETER	QUANTITY
1	51A1-150	Iron	Comp	7/8 x 13/16	7/16	1/4	1
	51A2-159	Iron	Comp	1 x 7/8	3/8	3/8	1
	51A2-160	Iron	Comp	1 7/16 x 1 1/4	3/8	5/8	1

TABLE 366 — BRACKET - 9G51

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	MAXIMUM CROSS SECTION	QUANTITY
1	51A2-167	Iron	Incomp	10 7/8 (R)	3/8	1

One wrought nail in place: head rosehead; shank squared; point missing.

TABLE 367 DOOR LOCK - 9G51

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	HOUSING: LENGTH	HOUSING: MAXIMUM WIDTH	HOUSING: MINIMUM WIDTH	HOUSING: PLATE: THICKNESS		QUANTITY
1	51A1-167	Iron	Incomp	5 3/16	3 3/16	NA	1/16		1
	Consisting of an incomplete housing with latch bolt, latch bolt spring and spindle missing.								
2	51A1-168	Iron	Incomp	5 1/2 (R)	4 7/16 (R)	Ind	1/16		1
	Consisting only of an incomplete front plate with a tumbler spring.								
Ind	51A1-163	Iron	PART Incomp	NA	NA	NA	1/16		1
	Consisting only of an incomplete cover plate.								

TABLE 368 HINGE - 9G51

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	WIDTH	MINIMUM WIDTH	THICKNESS	NUMBER PER SIDE AND DIAMETER OF FASTENING HOLES	COUNTERSINKING	HOLE ARRANGEMENT	T PLATE: LENGTH	MEDIAN: WIDTH	JOINT: LENGTH	SOCKET: INSIDE DIAMETER	QUANTITY
1	51A2-162	Iron	Incomp	2 17/32	15/16 (tml)	NA	1/8	3, 3/16	Front	Linear	NA	NA	NA	NA	1
	End of pin has been shaped into an eye.														
	51A2-163	Iron	Comp	2 17/32	1 7/8	NA	1/8	3, 3/16	F&B	Linear	NA	NA	NA	NA	1
	Six screws in place; Variation 1; length 7/8" - 1 1/8".														
7	51A1-161	Iron	Comp	6 3/4	1 1/2	-	3/32	3, -	-	-	NA	NA	NA	NA	1

TABLE 369 KEY - 9G51

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	BOW		STEM		PIN		BIT			COLLAR: DIAMETER	QUANTITY
					LENGTH	WIDTH	LENGTH	DIAMETER	LENGTH	DIAMETER	LENGTH	WIDTH	THICKNESS		
2	51A1-157	Iron	Incomp	3 5/16	27/32	1 5/32	1 5/8	7/32 - 5/16	27/32	1/4	17/32	Ind	5/32	5/16	1
Ind	51A1-156	Iron	Incomp	5 1/4	1	1 3/4	4 5/16	3/8	NA	NA	Ind	Ind	Ind	NA	1

Possible Variation 1 or 4.

TABLE 370 PINTLE - 9G51

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	SHANK			PIN		WING: MAXIMUM WIDTH	NUMBER AND DIAMETER OF FASTENING HOLES	REINFORCING ARM		QUANTITY
				LENGTH	MAXIMUM CROSS SECTION	WIDTH AT SHOULDER	LENGTH	MAXIMUM DIAMETER			LENGTH	MAXIMUM CROSS SECTION	
2	51A2-148	Iron	Comp	4 1/8	15/32 x 3/8	NA	1 7/8	7/16	NA	NA	NA	NA	1

TABLE 371 — SCREW - 9G51

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	QUANTITY
Ind	51A1-152	Iron	Frag	Ind	1
	Possible Variation 1 or 3.				
	51A1-153	Iron	Frag	Ind	1
	Possible Variation 1 or 3.				
	51A2-151	Iron	Frag	Ind	1
	Possible Variation 1 or 3.				
	51A2-152	Iron	Frag	Ind	1
	Possible Variation 1 or 3.				
	51A2-153	Iron	Frag	Ind	1
	Possible Variation 1 or 3.				
	51A2-154	Iron	Frag	Ind	1
	Possible Variation 1 or 3.				

TABLE 372 — SHUTTER DOG - 9G51

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	CATCH				ANCHOR		QUANTITY
				LENGTH	LOOP: DIAMETER	MAXIMUM WIDTH	MAXIMUM THICKNESS	LENGTH	MAXIMUM CROSS SECTION	
1	51A1-158	Iron	Par	2 11/16 (R)	2 3/16	NA	7/32	Ind	Ind	1
	Consisting only of half of a catch, broken at pivot hole.									
	51A3-24	Iron	Incomp	5	2 1/4 & 2 1/8	1 1/16	3/8	Ind	Ind	1
	Consisting only of a catch.									

TABLE 373 STAPLE - 9C51

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	INSIDE WIDTH	BAR: MAXIMUM CROSS SECTION	SHOULDER HEIGHT	PLATE LENGTH	PLATE WIDTH	PLATE THICKNESS	QUANTITY
4	51A2-149	Iron	Comp	5 5/16	1 1/8	7/16	NA	NA	NA	NA	1
8	51A1-160	Iron	Comp	4 15/16	3 1/4	1 x 7/32	NA	NA	NA	NA	1
10	51A2-159	Iron	Comp	5 1/4	1 1/4	1 3/16 x 11/32	1 3/8	NA	NA	NA	1

TABLE 374 — TIMBER ANCHOR - 9C51

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH	MAXIMUM CROSS SECTION	SHORT ARM: LENGTH	SHORT ARM: MAXIMUM CROSS SECTION	HEAD: LENGTH AND WIDTH or DIAMETER	HOLE: LENGTH AND WIDTH or DIAMETER	NUT: LENGTH AND WIDTH	QUANTITY
1	51A2-166	Iron	Comp	6 5/8	9/16 x 3/8	2 7/16	9/16 x 3/16	NA	-	NA	1

Wrought nail in place; Variation A2, length 3 3/8".

TABLE 375 — WASHER - 9C51

VARIATION	PROVENIENCE	MATERIAL	COMPLETENESS	LENGTH AND WIDTH or DIAMETER	THICKNESS	HOLE: DIAMETER or LENGTH AND WIDTH	FASTENING HOLE: DIAMETER	QUANTITY
5	51A1-162	Iron	Comp	3 3/16 x 2 3/4	7/32	3/4 x 13/16	7/32	1

TABLE 376 NAIL DISTRIBUTION (Variation and Length) — 9G51

Length \ Variation	A1	A2	A3	A4	A6	A26	A28	A30	A31	A47	A60	A61	A62	A63	A65	A67	A69	A70	A72
3/4																			
1						1			1										
1/4						2													
1/2						4													
3/4				1		6													
2						1	1												
1/4				3															
1/2				2															
3/4		1		2															
3				2															
1/4				5															
1/2		1		1															
		1		9															
3/4		2		4			1												
				4						1					1				
4			1	2									1						
				6															
1/4				6															
1/2			1	2														1	
				3															
3/4			1	4															
				2															
5			1	1								2					2	1	
1/4				1							1							1	
1/2				2							1	1					1	2	
3/4																		1	
6				1								1							
1/4																	1		
1/2																			
3/4																			
7																			
1/4												1					1		
1/2												1							
3/4											1						1		
8											1								
1/4																			
1/2																			
3/4																			
9																			
1/4																			
1/2																			
3/4																			
10																			
1/4																			
1/2																			
3/4																			
11																			
1/4																			
1/2																			
3/4																			
Indeterminate																			
TOTAL	127	5	3	67	172	14	2	6	1	1	4	6	1	9	1	1	6	6	9

TABLE 376 (cont.) NAIL DISTRIBUTION (Variation and Length) – 9651

Length \ Variation	A74	A77	A78	A79	A81	A92	A94	A95	A96	A103	A120	B6	B8	D2		TOTAL
3/4																
1																2
1/4																2
1/2																4
3/4														1		6
2												1		1		3
1/4																1
1/2																2
3/4																
3																2
1/4																2
1/2																3
3/4		1							1			3				3
4						1						1				6
1/4									1			1				3
1/2		1							2							11
3/4			1	2				4								8
5			2	1				3								6
1/4			1	2				2	3							4
1/2			1						1			1				8
3/4				3					1							7
6			1									1				7
1/4												1				4
1/2																5
3/4				1								1				3
7				1												1
1/4				1								1				1
1/2				1												2
3/4	1															1
8																3
1/4																1
1/2										1						1
3/4																
9																
1/4																
1/2																
3/4																
10																
1/4																
1/2																
3/4																
11																
1/4																
1/2																
3/4																
Indeterminate																
TOTAL	1	2	6	11	12	1	13	9	9	1	1	10	29	2		

Chapter 5

GENERAL DISCUSSION AND CONCLUSIONS

A total of 32,457 individual items and fragments plus an uncounted quantity of iron sheeting fragments, all representing some kind of building hardware, have been the subject of this study. These artifacts have been grouped into categories designated types, based on similarities of intended use, and these categories have been sub-divided into categories designated variations, based on similarities of manufacture and form. The various excavations have also been considered in terms of their artifacts and their construction history.

Each type has been defined and described, including a brief summary of its history, and each variation has been described in terms of its manufacture and form. Obvious differences exist in the quantity and quality of information presented for the various types and this can be taken as a partial reflection of the state of research in the field of building hardware. References for some of the categories do not exist in great abundance and some of the references which do exist are obscure and difficult to locate. Many of the references are also from professions other than historical archaeology or restoration and thus they often do not provide the kind of information required

for artifact research. The amount of research being carried out on building hardware by historical archaeology or restoration, two professions which should have a considerable interest in the subject, is apparently limited at present. Consequently, present research must concentrate on organizing and recording data rather than undertaking extensive comparisons and interpretations.

The time period for construction on the site spans part of the period when the manufacture of building hardware, as well as other artifact categories, was undergoing a shift from production of individual items by craftsmen to mass production by machinery in factories. This transition is reflected in some of the artifact types although not in others. Hand forging is still the predominant type of manufacture in the collection. The transition is reflected in the nails where hand forging was replaced by machine cutting from plates and later by machine cutting from wire. The nails, however, do not include examples of the earlier examples of machine cutting from plates in which the head were still hand-made and thus cruder and more irregular. The manufacture of hinges changes from hand forging to casting. The machine manufacture of hinges was presumably not an important process during the period of construction at the site. Other categories, such as door locks or thumb latches, are still primarily hand forged with infrequent examples of casting or machine manufacture.

Some aspects of the history of technology and artifact use have hopefully been brought into a sharper focus. It has become more obvious that the development of a new technology is not always followed by a rapid spread and acceptance of that technology or its products, resulting in the virtual disappearance of older technologies and their products. A transition from one technology to a newer one can be gradual, possibly extending over more than half a century, or it may be delayed by various factors. In the case of the Fort at Coteau du Lac the use of wrought nails persisted well into the 19th century and this persistence has been attributed to the nature and influence of the British military which was responsible for the majority of construction at the site. The use of cast hinges may also have been delayed into the 19th century. In studying artifacts from other sites consideration should thus be given to the possibility of time lags in the use of artifact categories.

For all of the excavations considered the nature of the area being excavated is known through other sources such as documentation and the presence or absence of structural remains. In some cases a building site has a large quantity of artifacts but in others there are relatively few. It has been possible to interpret artifact quantities through reference to other sources. In the absence of such other sources, such as a site which had

been robbed for its building materials, disturbed by more recent activities or for which no documentation exists, it would not be possible to consider the evidence from the building hardware as absolute proof for the presence of a building. The conclusions reached here are relevant primarily to the site in question and provide only a limited basis for comparison for other sites.

REFERENCES CITED

Anonymous

1833

"Fabrication des Clous". Magasin Pittoresque, Vol. 1, No. 24, p. 187, Paris.

1888

"Builders' Hardware - III. Nails". The American Architect and Building News, Vol. 24, No. 660, pp. 72-4.

Aston, James and Edward B. Story

1936

Wrought Iron: Its Manufacture, Characteristics and Application.

A.M. Byers Co., Pittsburgh.

Barlow, Peter

1851

The Encyclopaedia of Arts, Manufactures and Machinery.

John Joseph Griffin and Co., London.

Benjamin, Park

1882

Appletons' Cyclopaedia of Applied Mechanics. D. Appleton and Co., New York. 2 Vols.

Canada. Public Archives

RG 8, C Series, C11, Vol. 1764, Correspondence Subject Files, New Brunswick, 1831-73.

RG 8, C Series, C24, Vol. 1433, Miscellaneous Records of the Commanding Royal Engineer, 1761-1892, Royal Engineers Office, Halifax, List of Nails and Spikes required for the service of the Office of Ordnance. Approved by the Honorable Boards Order of the 29 July 1812.

Chamberlain, Joseph

1967

"Manufacture of Iron Wood Screws". in Samuel Timmins (ed.) The Resources, Products, and Industrial History of Birmingham and the Midland Hardware District. Reprint of 1866 ed., Frank Cass and Co., London.

Chism, James V.

1972

"Excavations at Lower Fort Garry, 1965-1967; A General Description of Excavations and Preliminary Discussions". Canadian Historic Sites: Occasional Papers in Archaeology and History, No. 5, National Historic Sites Service, Department of Indian Affairs and Northern Development, Ottawa.

Cotter, John L.

1958

"Archeological Excavations at Jamestown, Virginia". Archeological Research Series, No. 4, National Park Service, Department of the Interior, Washington.

Dempsey, G. Drysdale

1851

The Builder's Guide....Atchley and Co. London.

Dickinson, H.W.

1946

"Origin and Development of Wood Screws". Newcomen Society for the Study of the History of Engineering and Technology, Transactions, Vol. 22 (1941-42), pp. 79-89, London.

Dunton, John

1972

Building Hardware Excavated at the Fortress of Louisbourg. Manuscript Report Series, No. 94, National Historic Sites Service, Department of Indian Affairs and Northern Development, Ottawa.

Durbahn, Walter E.

1961

Fundamentals of Carpentry. 3rd ed., American Technical Society, Chicago.

Eastlake, Charles L.

1872

Hints on Household Taste in Furniture, Upholstery, and other Details. James R. Osgood and Co., Boston.

Falconer, William

1815

A New Universal Dictionary of the Marine....Modernized and enlarged by William Burney. Cadell, Davies and Murray, London.

Folan, William J. and George Ingram

1972

The Fort at Coteau du Lac. MS, National Historic Sites Service, Department of Indian Affairs and Northern Development, Ottawa.

Folan, William J. and Peter J. Priess

1972

Archaeological Investigations at Lower Fort Garry, 1971. Manuscript Report Series, No. 84, National Historic Sites Service, Department of Indian Affairs and Northern Development, Ottawa.

Fontana, Bernard L.

1965

"The Tale of a Nail: On the Ethnological Interpretation of Historic Artifacts". Florida Anthropologist, Vol. 18, No. 3, Pt. 2, pp. 85-102.

Fontana, Bernard L. and J. Cameron Greenleaf

1962

"Johnny Ward's Ranch: A Study in Historic Archaeology". The Kiva, Vol. 28, Nos. 1-2, Arizona Archaeological and Historical Society, Tucson.

Great Britain War Office.

1898

Priced Vocabulary of Stores used in Her Majesty's Service. London.

Heite, E.F.

1969

"A Question of Nail Sizes". Archeological Society of Virginia, Quarterly Bulletin, Vol. 24, No. 1, p. 79, Richmond.

Hewett, Cecil A.

1972

"Seventeenth-Century Carpentry in Essex". Post-Medieval Archaeology, Vol. 5, pp. 77-87, The Society for Post-Medieval Archaeology, London.

Hodgen, Margaret T.

1952

Change and History: A Study of the Dated Distributions of Technological Innovations in England. Viking Fund Publications in Anthropology, No. 18, New York.

Holland, John

1831-34

A Treatise on the Progressive Improvement and Present State of the Manufactures in Metal. The Cabinet Cyclopaedia conducted by the Rev. Dionysius Lardner, Longman, Rees, London. 3 vols.

Hommel, Rudolf

1944

"The Secret Joint Hinge". Early American Industries Association, Chronicle, Vol. 3, No. 1, pp. 3-4.

Hughes, G. Bernard

1957

"English Domestic Locks". The Connoisseur Year Book, 1957, pp. 100-7, London.

Kellerman, Rudolf and Wilhelm Treue

1962

Die Kulturgeschichte der Schraube. 2nd ed. rev., Verlag F. Bruckmann, Munich.

Kenrick, William

1967

"Cast-Iron Hollow-Ware, Tinned and Enamelled, and Cast-Ironmongery". in Samuel Timmins (ed.) The Resources, Products, and Industrial History of Birmingham and the Midland Hardware District. Reprint of 1866 ed., Frank Cass and Co. Ltd., London.

Kilbourne, William

1960

The Elements Combined: A History of The Steel Company of Canada. Clarke, Irwin, Toronto.

Knight, Charles

1851

Cyclopaedia of the Industry of All Nations. Charles Knight, London.

Knight, Edward H.

1876

American Mechanical Dictionary....Hurd and Houghton,

New York. 3 vols.

Laboulaye, Charles (ed.)

1844

Dictionaire des Arts et Manufactures; Description des Procédés de l'Industrie Française et Etrangère. Libraire Polytechnique D'Aug. Decq, Brussels. 2 vols.

Larrabee, Edward McM.

1968

"Machine Made Nails from a War of 1812 Site at Sackets Harbour, New York". The Conference on Historic Site Archaeology, Papers 1967, Vol. 2, Pt. 1, pp. 72-84, Raleigh, North Carolina.

Martineau, F.E.

1967

"Patent Wrought-Iron Hinges". in Samuel Timmins (ed.) The Resources, Products, and Industrial History of Birmingham and the Midland Hardware District. Reprint of 1866 ed., Frank Cass and Co. Ltd., London.

Mercer, Henry C.

1923

"Notes on Wrought-Iron Door Latches". Old-Time New England, Vol. 13, No. 3, pp. 139-42, The Society for the Preservation of New England Antiquities, Boston.

1924

"The Dating of Old Houses". Old-Time New England, Vol. 14, No. 4, pp. 170-90, The Society for the Preservation of New England Antiquities, Boston.

1960

Ancient Carpenters' Tools. 3rd ed., The Bucks County Historical Society, Doylestown, Pennsylvania.

Nelson, Lee H.

1968

"Nail Chronology as an Aid to Dating Old Buildings". American Association for State and Local History, Technical Leaflet, No. 48, Nashville.

Neve, Richard

1726

The City and Country Purchaser, and Builder's Dictionary: or the Compleat Builders Guide. Browne, Sprint, Conyers and Rivington, London.

Nicholson, Peter

1823

The New Practical Builder and Workman's Companion .... Thomas Kelly, London.

Noël Hume, Ivor

1970

A Guide to Artifacts of Colonial America. Alfred A. Knopf, New York.

Price, George

1856

A Treatise on Fire and Thief-Proof Depositories and Locks and Keys. Simpkin, Marshall, and Co. and E. and F.N. Spon, London.

Priess, Peter J.

1970

"Penny Wise, Penny Foolish: The Description of Nail Sizes". The Society for Historical Archaeology, Newsletter, Vol. 3, No. 3, pp. 8-9.

1972

"History Swings on a Poorly Described Hinge: Reflections on the State of Research in Building Hardware". Association for Preservation Technology, Bulletin, Vol. 3, No. 4, pp. 31-9.

Priess, Peter J. and P. Michael Shaughnessy

1972

An Inventory of Canadian, British and American Nail Patents to 1900. Manuscript Report Series, No. 93, National Historic Sites Service, Department of Indian Affairs and Northern Development, Ottawa.

Pye, David

1968

The Nature and Art of Workmanship. Cambridge University Press, Cambridge.

Salzman, L.F.

1967

Building in England down to 1540. Clarendon Press, Oxford.

Smith, Cyril S.

1966

"Iron from the Slitting Mill at Saugus". Publications in the Humanities, No. 75, Massachusetts Institute of Technology, Cambridge.

Smith, H.R. Bradley

1966

Blacksmiths' and Farriers' Tools at Shelburne Museum. Museum Pamphlet Series, No. 7, Shelburne Museum Inc., Shelburne, Vermont.

Smith, J. Bucknall

1891

A Treatise Upon Wire, Its Manufacture and Uses, Embracing Comprehensive Descriptions of the Constructions and Applications of Wire Ropes. John Wiley and Sons, New York.

Sonn, Albert H.

1928

Early American Wrought Iron. Charles Scribner's Sons, New York. 3 vols.

Stevens, John R.

1969

"Early Cast Iron Latches". Association for Preservation Technology, Bulletin, Vol. 1, No. 3, pp. 11-3.

Streeter, Donald

1954

"Early Wrought-Iron Hardware: Spring Latches". Antiques, Vol. 66, No. 2, pp. 125-7, New York.

1970

"Early American Stock Locks". Antiques, Vol. 98, No. 2, pp. 251-5, New York.

1972

"Early American Wrought Iron Hardware: Norfolk Latches". Association for Preservation Technology, Bulletin, Vol. 3, No. 4, pp. 12-30.

Swannack, J.D. (ed.)

1971

National Historic Sites Service Archaeological Excavation Manual. MS 592, National Historic Sites Service, Department of Indian Affairs and Northern Development, Ottawa.

The Montreal Herald

1819

Advertisement of John Wragg and Co., Vol. 8, No. 38, p. 3.

Tomlinson, Charles

1852

Cyclopaedia of Useful Arts, Mechanical and Chemical, Manufactures, Mining and Engineering. George Virtue and Co., London/New York.

Viollet-le-Duc, E.

1875

Dictionaire Raisonné de L'Architecture Française du XI au XVI Siecle.

V.A. Morel and Co., Paris.

Winstone and Co.

n.d.

Catalogue of Modern Fire Places, Sanitation, Locks and Fastenings, Pipes and Gutters, and Stable Fittings.

Winstone and Co., London.

Winterton, K.

1961

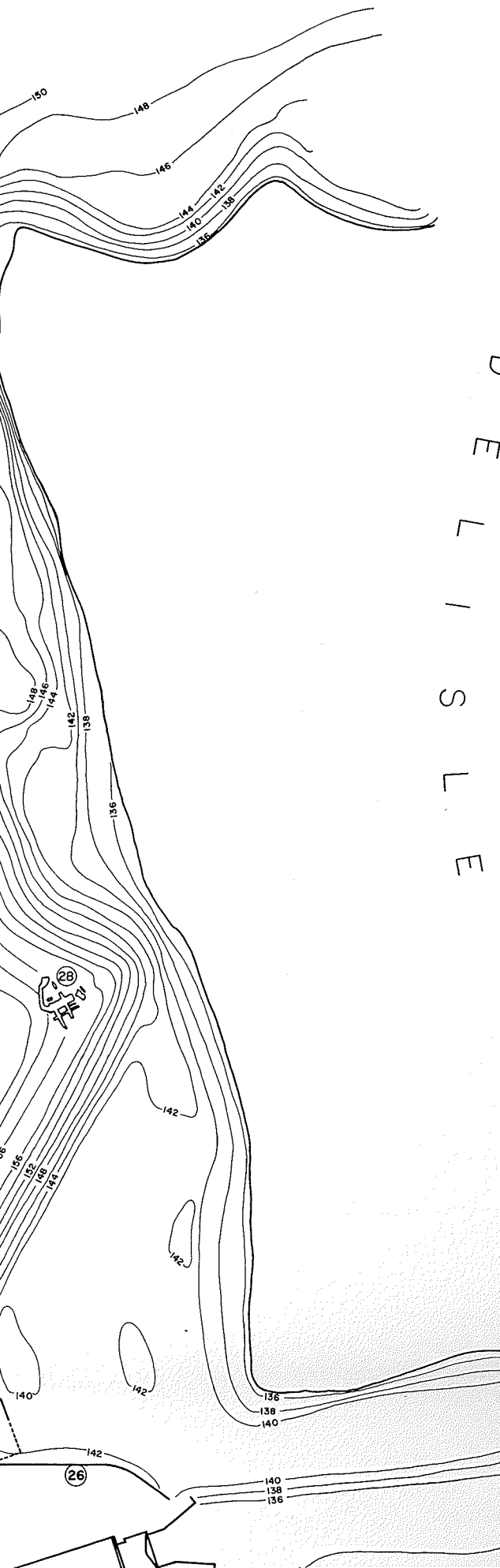
"A Brief History of Welding Technology".

Mines Branch, Department of Mines and Technical Surveys, Information Circular 124, Ottawa.

Woodcroft, Bennet

1969

Alphabetical Index of Patentees of Invention. Reprint of 1854 ed., Augustus M. Kelley, New York.



LEGEND

MODERN FEATURES

- (A) SURVEY POST
- (B) MASONRY CAIRN
- (C) PARKING AREA
- (D) MUSEUM
- (E) ROADS
- (F) IRON PICKET FENCE
- (G) WIRE FENCE
- (H) CONCRETE WEIR

HISTORIC STRUCTURES

- (1) CANAL
- (2) SCARP WALL
- (3) OCTAGONAL BLOCKHOUSE
- (4) COMMANDANT'S QUARTERS
- (5) STOREHOUSE - GUNSHED
- (6) STOREHOUSE - TEMP. OFFICERS' QTRS.
- (7) NORTH BLOCKHOUSE
- (8) SOUTH BLOCKHOUSE
- (9) HOSPITAL
- (10) CLOVER-LEAF BASTION
- (11) HOSPITAL - MASTER CARPENTER'S QTRS.
- (12) GUN PLATFORM
- (13) BARRACKS - CARPENTERS' SHOP - STABLE
- (14) POWDER MAGAZINE
- (15) STONE BARRACKS
- (16) ENTRANCE (PRE-1814)
- (17) CHAPEL
- (18) CANTEEN
- (19) UNIDENTIFIED BUILDING
- (20) BRIDGE ABUTMENTS
- (21) GUARD HOUSE
- (22) BAKE HOUSE
- (23) BARRACKS MASTER'S QUARTERS
- (24) COOKING HOUSE
- (25) BARRACKS STORES
- (26) RETAINING WALL
- (27) NORTH WEST GUN PLATFORM
- (28) NORTH EAST GUN PLATFORM
- (29) SOUTH WEST GUN PLATFORM
- (30) SOUTH EAST GUN PLATFORM
- (31) MAYPOLE


A
B
C
D
E
F
G
4
7
12
13
14
15
16
17
21
23
24
25
26
27
28
29
31
140
142
144
146
148
150
152
154
156
158
160



13
15
31
4
17
23
29
A
B
E
F
G
142
144
146
148
150
152
154
156
158
160


H
ST
L A W R E
1
2
5
8
15
24
29
30
136
138
140
142
144
146
148
150
152
154
156
158
160

V E R

N C E R I V E R

DEPARTMENT OF INDIAN
CANADIAN H

T

COTEAU-

DRAWN BY	SCALE
A. E. W.	0 20

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
CANADIAN HISTORIC SITES DIVISION

THE FORT
AT
COTEAU-DU-LAC, QUEBEC

DRAWN BY	SCALE	DATE
A. E. W.	0 20 40 60 80 100 FT.	MAY 1967

R I V E R

L A K E